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# THE AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS

## COMMITTEE G, BIBLIOGRAPHY

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# GENERAL ANNOUNCEMENTS

ANNUAL MEETING.—A report on the annual meeting held November 30th and December 1st at Columbus, Ohio, will appear in the January BULLETIN together with the usual list of members. Any necessary corrections for the latter are requested.

AMERICAN COUNCIL ON EDUCATION.—At the September meeting of the Executive Committee the Director reported that the National Conference Committee on Standards of Colleges and Secondary Schools had transferred its membership to the Committee on Standards of the Council and thereby gone out of existence.

It was voted that steps be taken to add to the committee of the Council representatives of constitutent members not already included.

The invitation for participation in the co-operating council of the American Peace Award was accepted.

NATIONAL RESEARCH COUNCIL.—"*Recent Gifts for Council Work.* Two notable money contributions have come to the Council, since the last meeting of the Board. One is a gift of $60,000 from the Laura Spelman Rockefeller Memorial to enable the Council's important Committee on Human Migrations, especially affiliated with the Division of Anthropology and Psychology, to carry out a carefully formulated program of work involving the active participation of a group of distinguished investigators representing anthropology, psychology, general biology and sociology. A previous gift of $5000 had been made to the Council by the Russell Sage Foundation for the preliminary organization work of this committee.

"The other notable gift is one of $100,000 from a private donor, made through the Bureau of Social Hygiene, for the continued maintenance during two years of the work of the Council's Committee for Research on Sex Problems. This committee has been actively at work during the last year with resources available to it of $25,000 given to the Council for the purposes of the Committee by the same donor.

"*Publications.*—Seven numbers in the Council's Bulletin Series have been issued since the last meeting of the Executive Board.

"The division of educational relations has in preparation, in connection with its interest in stimulating a special attention on the

part of universities and colleges to the students of unusual capacity, a report on honors systems as at present administered in about 25 American institutions.

"A second series of research career bulletins prepared by men of well-recognized scientific standing at the request and under the direction of the division has been nearly completed and published. Free distribution of these bulletins in considerable lots to universities and colleges on specific request from presidents and deans will be begun this month.

"The research information service has been busy with its partial reorganization. Two compilations by the Service have been published during the summer, one, a list of doctorates conferred in the arts and sciences by American universities during the period 1921–1923, the other a list of manuscript bibliographies in the biological sciences. A preliminary 14-page list of references on the use of standardized tests in colleges and universities was prepared and distributed in mimeographed form to active investigators in this particular field.

"There are now twenty-four national research fellows in physics; twenty-seven in chemistry and thirty medical fellows.

"The biological divisions co-operated in representations to the Governor of the Canal Zone which resulted in the setting aside of Barro Colorado Island in Gatun Lake as a biological preserve. Plans by the Institute for Research in Tropical America are under way for providing the island with necessary facilities for scientific work.

"The division of anthropology and psychology has discharged its committee on National Intelligence Tests, to which important committee was due the formulation and publication of the National Intelligence Tests for use in schools, of which a large number of sets have been sold."

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN.—The educational program adopted at the recent Portland convention includes the following items:

"That the association undertake through the office of the Educational Secretary a study of the education of women in the liberal arts colleges, in co-operation with a committee of the Commonwealth Fund of New York, which is studying the college of liberal arts.

"That as soon as its other work permits, the association make a

study of policies in regard to promotion and tenure of college and university faculties."

COLLEGE ENTRANCE EXAMINATION BOARD.—The twenty-third annual report of the Secretary of the Board discusses the general argument for an external examination system as against the use of school records alone. Methods of grading by the Board readers are reviewed and the futility of percentiles is pointed out.

It appears that in 1923 candidates came from more than 1600 schools, of which nearly 600 sent only a single candidate each. The number of colleges to which admission was sought was 174—more than half of them, however, having but one or two candidates. Three of the colleges had more than 2000 each.

Of the 1633 schools sending candidates in June, 1923, 903 were public schools; of the 18,913 candidates, 6597 live in New England, 7556 in the Middle Atlantic States; 8621 come from New England schools, 6444 from schools in the Middle Atlantic States; 11,113 seek admission to New England colleges, 5570 to colleges in the Middle Atlantic States; 12,708 are boys, 6205 girls; 6344 come from public schools, 11,889 from private schools; 580 readers were employed by the Board and the average cost of reading papers was 39c, varying however from a minimum of 26c, (in one of the mathematical subjects) to more than $2 in New Plan Comprehensive English.

The Board has recently adopted new definitions of the various examination subjects in Mathematics and Physics, while a revision of Chemistry is now under consideration.

UNITED STATES BUREAU OF EDUCATION BULLETIN, 1923, No. 37, discusses progressive tendencies in European education, primarily with reference to secondary education.

"Europe is educationally alive. It is true that in the countries where there is high centralization of control the number of educational experiments is limited; it is true that the rank and file of teachers, while better trained than the majority of American teachers, are much less cognizant of the existence or desirability of intelligence or achievement tests; it is true that few universities in Europe have anything corresponding to our departments of education; it is true that with one or two exceptions in England one finds no bureaus of educational research in the cities of Europe. Yet, in spite of these lacks, there are

a number of lines of educational endeavor of importance and interest to any serious student of education."

C. W. WASHBURNE.

AMERICAN UNIVERSITY UNION IN EUROPE.—The meeting of the Trustees was held in New York, October 29th, Messrs. Armstrong, Lovejoy and Tyler attending as representatives of the Association. The Board confirmed the appointment of Dr. C. A. Duniway as Director of the British Division, and the Secretary announced the acceptance of the Directorship of the Continental Division by Professor Algernon Coleman. Dr. G. E. MacLean, the retiring Director of the British Division was requested to describe the work of the Union at the meetings of the National Association of State Universities, the Association of Land Grant Colleges and the Association of American Colleges. The officers at London and Paris were requested to report on the practicability and expense of establishing in their offices appointment bureaus to assist students abroad in obtaining positions in American Colleges and universities.

INSTITUTE OF INTERNATIONAL EDUCATION.—A special *Bulletin* for Administrative Authorities of Universities and Colleges contains an extended list of foreign professors available for teaching engagements, and the text of an immigration order affecting foreign students. The Institute furnishes a blank for use by colleges and undertakes to make arrangements with the immigration authorities at New York City and Washington. It requests college officials in corresponding with a foreign student to impress upon him the importance of notifying either the college or the Institute, well in advance, of the name of the ship and steamship line upon which he has secured passage and the probable date of arrival and name of port of entry in the United States.

"The Institute has received from its representative in England the following request: 'The Secretary of the Sheffield Branch of the Anglo-American Society is anxious to get in touch with American professors who expect to be in England during the coming academic year, in order that they may secure them to speak before the Society.' As opportunities of this sort in all countries are likely to arise at any time, the Institute urges professors intending to spend the year or

part of the year abroad to notify the Institute as much in advance as possible, advising what countries they expect to visit.

*China and the Chinese*

"In November and December the Museum and Public Library of Newark, N. J., are holding an exhibition 'planned,' as its advance notice reads, 'to open the eyes of Americans to the richness and fineness of Chinese culture, to its continuance through the centuries while other cultures fell, to China's vast size and boundless resources, and to the industry, patience, intelligence, stability and vigor of its people.' This exhibition will in addition indicate powers at work and progress made in this transitional period in China, and present some of the most urgent problems which the Chinese must meet. A great deal of material illustrative of the new education in China will be exhibited. Government agencies, officials, both Chinese and American, educational institutions and leaders, chambers of commerce and merchants, and private individuals in many walks of life, both Chinese and American, are contributing to the exhibition.

*Assistants in French Lycées*

"'The Institute wishes to call attention to the positions offered American men each year by the French Government, known as 'postes assistants.' Ten of these have been offered for the past three years to American men.". .

"An assistant should have the American degree of B.A. or B.S. or a degree approximately of the value of one of these. Exceptions may occasionally be made to this requirement; if so it is generally in favor of candidates who have had at least three years of French and who can speak French.

"It is suggested that the professors to whom this *Bulletin* is sent make this opportunity known to young men who are teaching French, or desire to become teachers of French, as a very excellent way of having a year in France at a small outlay."

UNIVERSITIES BUREAU OF THE BRITISH EMPIRE.—This Bureau grew out of the Congress of 1912 when all the fifty-three universities in the Empire were represented. In 1919 the government offered a capital sum of 5000 pounds on condition that the universities undertake to provide an adequate income. The Bureau thus acquired

headquarters at 50 Russell Square, London, where visitors from foreign countries and from the colonies may obtain information in regard to all the universities of the United Kingdom and British teachers and students may receive information about universities abroad. The American University Union in Europe and other similar agencies have established headquarters in the same building.

THE ASSOCIATION OF UNIVERSITY TEACHERS (BRITISH).—This Association, which has been previously mentioned in the *Bulletin*, publishes as its organ an attractive periodical called *The University Bulletin*. The introductory editorial, vol. 1, no. 1, is in part as follows:

"We moderns have to learn and to practice three loyalties: loyalty to our Kingdom, loyalty to our race, and loyalty to human brotherhood. As a rule, these loyalties do not conflict with one another. When they clash, conscience tells us which of them has the stronger claim upon our duty. To apprehend these loyalties and to be faithful to them needs an imaginative and well-stored mind, a sensitive heart and stubborn tenacity of principle.

"Likewise upon us as University teachers it is laid to learn and practice three professional loyalties: loyalty to the institution which we serve, loyalty to the Univeristy life of our nation, and loyalty to the University ideal which inspires conscientious and self-denying service in the hearts of University teachers throughout the world. Each one of us is a member of a great society—be it venerable in years or of recent origin—which is one of the sisterhood of Universities. Each of us is a member of a great profession and of that part of it which endeavors to uphold the intellectual standards and the pastoral functions of the Universities of Britain. Each of us is one of the larger brotherhood which is covenanted to the service of truth and learning throughout the world. To discharge the three duties thus committed to us we need knowledge, conscience and conviction. . .

"The Association of University Teachers may help us to perform each part of our threefold loyalty with fuller knowledge of what needs to be done, with a stronger sense of comradeship, and with firmer courage in the defense of our intellectual liberty and in the enunciation of our professional needs."

In his review of the aims and activities of the Association, Professor John Strong, of the University of Leeds, remarks:

"One of the valuable results of the formation of an Association of University Teachers is almost too elusive to assess. By bringing together two or three times a year representatives from the various universities and institutions of University rank, widely separated as they are, there has resulted a feeling of oneness, of community of interest, of fellowship in a great adventure, which it would have been almost impossible to achieve in any other way. 'The Universities do not combine,' said the present Minister of Education some three years ago, and his statement was justified in history. Yet this Association is concrete evidence of the fact that history is not always a safe guide in generalising."

Professor R. Douglas Laurie, in a historical sketch states:

"The Association of University Teachers was christened at Bristol on June 28th, 1919; its constitution ratified in Manchester in December, 1919; and in May, 1920, in London, a fully representative gathering of duly appointed delegates adopted a Memorandum which forms the University Teachers' Magna Charta, the first corporately voiced statement of his professorial aspirations.

"The objects of the Association are 'the advancement of University Education and Research and the promotion of common action among University Teachers and the safeguarding of the interests of the members.' We are not incorporated as a Trade Union, but the last phrase of the objects as given above constitutes us a Trade Union in the wider definition of the term, which includes all associations of people, whether employers or employees, one of whose purposes in associating is to safeguard their interests. It would be unfortunate should any who feel that their own interests are already safeguarded abstain from helping their less fortunate colleagues, or should they withhold their support from an organization which has such important further objects also at heart. For, after all, the work of a University Teacher is his vocation, and he is at heart, I take it, a guildsman rather than what is generally understood by a trade unionist."

Committee reports are included on salaries and on parliamentary representation, the Council of the Association expressing its unanimous opinion that in the interest of education and especially at the present time it is of the greatest importance that an active member of the teaching profession should be elected to Parliament.

The Association now has committees on Salaries, Grading, Superannuation, Representation of Members of Teaching Staffs on University Bodies, Facilities for Advanced Study and Research, Postgraduate Degrees, Entrance Requirements for the Universities, Parliamentary Representation, Representation on the Teachers' University Election Association, Income Tax, and Relations with Teachers in Colonial Universities.

Professor Boillot, of the University of Bristol, writes:

"I should like to bring to the notice of the members of our Association a recently-founded Institution called 'La Bienvenue Française.' Its aim is to give facilities to foreigners visiting France, to make their stay as pleasant and interesting as possible, and to show them the country in its true light. The President is Marshall Foch, and the Headquarters are at No. 33, rue du Faubourg St. Honoré, Paris. I suggest that our colleagues going over to France would do well to call there, and I feel certain they will receive a welcome that justifies the name."

"The University professors of Paris hold a meeting at 5.30 P.M. each Tuesday, called 'Le Rapprochement Universitaire.' The meeting is held at 117 Boulevard St. Germain, and the Paris professors will be glad to welcome their colleagues from other countries."

Vol. 2, no. 2 contains interesting statistics on salaries paid to teachers in certain universities and institutions of university rank in England and Wales.

In a report on Relations with Teachers in Colonial universities the following passages are of interest:

"Communication has furthermore been established with the very strong Association, formed in 1915, and embracing 180 institutions in U. S. A. and Canada. It has produced a long series of very valuable reports on various aspects of University life. It is obviously to the interests of our Association to be in close touch with this movement. . .

"In the Scottish Universities an Association has been formed on lines parallel to ours, and a general invitation has been given to that Association to send representatives to be present without voting power at the meetings of the Central Council. It is suggested that a similar invitation should be extended to corresponding members of the Association of University Teachers who may from time to time

be in this country, as well as to representatives of the American Association of University Professors."

A summary of the activities of our Association and of the aims and contents of our *Bulletin* is given.

INTERNATIONAL COMMISSION ON INTELLECTUAL CO-OPERATION.—A plenary session has been held at Geneva under the presidency of Professor Bergson. The commission approved the action of its subcommittee on bibliography recommending, in view of the impossibility of establishing at the present time a complete international library, the co-ordination of libraries already existing in the principle centers. The subcommittee recommended also the publication of a bibliographic index and conferences of experts on analytic bibliography to co-ordinate the work of reviewers and existing libraries, and thus prevent duplication of effort.

The commission decided to transmit to the Council and to the Assembly of the League of Nations a draft agreement for the protection of property rights in scientific work, as elaborated by Professor Ruffini, of Turin, formerly minister of public instruction in Italy. The request is made that the several governments establish protection for authors of scientific discoveries analogous to that accorded by law to the artist and the author. The establishment of an international agreement for the protection of scientific property rights would result in the creation of a new international league, which would rank with the two leagues now existing, the one for the protection of industrial rights and the other for the protection of artistic and literary property.

The Commission on Intellectual Co-operation adopted the following resolutions for promoting mutual aid in intellectual work:

1. The commission warmly approves the creation of national commissions on intellectual co-operation, such as have been established in the countries of central and eastern Europe.
2. The commission invites national commissions already created, and those that may be established later, to appoint delegates to meet with it to consider the best means of organizing mutual aid in intellectual work.
3. The commission begs the Council to request governments that are members of the League of Nations to lend moral and financial support to the endeavors of the national commissions.
4. The commission begs authority from the Council to accept dona-

tions from institutions that manifest an interest in its endeavors, such funds to be placed at the disposal of the national commissions.

Various reports on the present conditions of intellectual work in the several countries were presented to the commission.

CONFERENCE OF COLLEGE TREASURERS.—At a conference of college treasurers held at the University of Chicago from August 15th to 31st under the auspices of the General Education Board the consensus of opinion regarding the problems considered was embodied in some thirty resolutions. Condensed statements of some of these resolutions follow:

Colleges should have audits made by a public accountant rather than by a voluntary auditor and the accountant should be selected by a committee of the trustees other than the finance committee.

Receipts of colleges should be reported on a cash basis rather than on an accrual basis.

Accounts overdue at the close of the fiscal year should be conservatively appraised and included in the income of that year.

Pledges to endowment campaigns should not be included among the assets of the college but should be recorded in subsidiary books as memoranda accounts.

The report of the treasurer should contain a condensed balance sheet, with items fully explained by supporting schedules.

As a general principle it is unwise to invest endowment in college buildings.

Land, buildings and equipment should be carried on the books at cost. Present value should be ascertained for insurance purposes.

Colleges should make a budget of expenditures that does not exceed the available income.

Accounts of business or self-supporting departments should be separated from accounts of the educational departments.

Laboratory fees should be based on the cost to the institution of the supplies and equipment used.

Receipts from laboratory fees should be credited directly to the college income.

For purposes of appraisal a value of $1 a volume may be placed on books in the college library.

A college has a definite obligation in training its students in good business methods. The fiscal officers should lend assistance to student organizations in accounting and reporting.

"Fundamental principles in the making of a college budget were set forth by a special committee and were adopted by the conference."

# COMMITTEE A, ACADEMIC FREEDOM AND TENURE

SUB-COMMITTEES have recently been appointed to investigate cases at the University of Tennessee (J. W. Garner, Illinois, Chairman); University of Montana (A. W. Vernon, Carleton, Chairman); West Virginia University (G. J. Thompson, Pittsburgh, Chairman) and Iowa Wesleyan University (B. L. Ullman, Iowa, Chairman).

THE UNIVERSITY OF CALIFORNIA.—A case from the University of California presented to the Committee on Academic Freedom and Tenure of the Association calls for comment although the Committee is not taking further action in the matter. If the machinery of university organization is modified so that members of the faculty are supposed to have a voice in matters affecting dismissals, tenure and the like, what practical effect will such faculty recommendations upon a given question have upon action by governing boards and administrative officers?

The necessary facts may be briefly stated. Hermann J. Weber, Associate Professor of German in the University of California, was dismissed by vote of the regents of the institution August 11, 1918, the dismissal as of May 7, 1918. The cause, as stated in the president's report, was for conduct inimical to the United States. The recommendation for dismissal was made by the Administrative Board, consisting of three of the deans of the various colleges and the notice of dismissal was signed by President Wheeler. In the fall of 1919 certain changes were made in the form of government theretofore prevailing in the university and faculty committees were created, for the purpose, *inter alia*, of advising concerning the appointment and dismissal of professors.

The Committee on Tenure and Privileges, appointed by the Academic Senate in accordance with the changes described, was headed by Professor (now Dean) O. K. McMurray. The case of Mr. Weber came before this committee. An elaborate fact investigation was held, and witnesses heard. The committee reported to the Senate that the evidence was insufficient to justify a decision that Mr. Weber was disloyal or guilty of an unsatisfactory attitude toward the war; that he was dismissed without definite charges preferred

against him and that the dismissal should be reconsidered by the Board of Regents. This report was submitted to the Senate, and approved by that body, and presented in the form of a memorial to the Board of Regents. September 13, 1921, the Board unanimously voted to deny Mr. Weber's reinstatement. The Weber matter has been before a joint committee of the faculty and several members of the Board, created by the changes made in 1919. Two members of the Administrative Board which recommended Mr. Weber's dismissal (the third member has died) requested the Regents, in writing, to examine the evidence not before the Board when the original decision was made. On May 6, 1922, through a Regent member of the joint committee, the Senate's recommendation of reconsideration of the Weber case was brought before the Board. It was voted to decline to reconsider the case.

It should be added that there never has been any investigation by the Board of Regents as a body or through a committee of its own, of the Weber matter. The dismissal was made upon the recommendation of the Administrative Board.

There the matter stands. Does the case demonstrate futility of professorial attempts to effect much needed changes in university government? So long as the faculty has no voice in institutional affairs, the profession can at least console itself with the hope of change. The hope avails little if when the governmental changes are made, careful faculty opinion and findings of fact are to be ignored by those occupying the seats of authority. Such action cannot be viewed with approval by this Association or be deemed in accord with the ideal for which we are striving. It could not but call for more definite action, if it were likely to be taken as a precedent. There are certain conditions in the case, however, which are unusual and of a type not likely to recur. In the first place the dismissal of Professor Weber came more than a year before there was any place in the machinery of the university for faculty participation. True, the faculty committee did investigate the case even though it arose prior to the creation of the faculty committee. But a reluctance on the part of administrative officers and a governing board to open up an old case is natural, and to be expected, the more when it involves the possibility that prior action was hasty and ill-advised. Further, Professor Weber's case was a wartime case. In an ideal state of society that would make no difference, but in an ideal state of society

there would be no war. It seems impossible to produce the fever heat of wartime enthusiasm without many cases of individual hardship for those justly or unjustly suspected of entertaining views favoring what the majority believes is the wrong side. Instances in academic circles only reflect what is going on in numerous cases outside institutions of learning. These all alike are deserving of condemnation from intelligent and patriotic citizens as delaying the progress of society from arbitrary action toward legal and orderly methods of government, whether in university or political affairs. We should have wished that the California Board of Regents had paid some attention to the recommendation of the faculty committee. That they did not in this case need not leave us with the hopeless conclusion that they will not in other cases in the future.

H. F. GOODRICH, *Chairman of Committee A.*

## COMMITTEE G, A BIBLIOGRAPHY OF METHODS OF INCREASING THE INTELLECTUAL INTEREST AND RAISING THE INTELLECTUAL STANDARDS OF UNDERGRADUATES

Committee G has endeavored to collect references to all discussions in American publications for the period 1901–22 of one or more of the 67 methods listed in the Survey of the Field of Work printed in its Preliminary Report, in the *Bulletin*, VIII (1922), 61–67. Part I of the present Bibliography affords a list of the material examined. Part II lists the several methods, and affords for each a set of references to discussions, in the material listed in Part I, of the method in question—except that such sets of references are not given in the case of the methods for which special reports (containing bibliographies) have been printed or will soon be printed in the *Bulletin*.

Part I is itself divided into five sections, as follows:

A. Books of general importance
B. Periodicals (other than University and College periodicals)
C. Educational bodies (other than Universities and Colleges), Publications
D. Universities and Colleges, Publications (official and unofficial)
E. Miscellaneous

Section E lists a few books of limited scope (that is, bearing on only one or two of the several methods); pamphlets; a periodical of limited scope; and articles in periodicals or publications other than those listed in sections B–D.

In Part II the several publications listed in Part I are, for the sake of brevity, referred to by number only.

The greater part of the material was examined by two groups of readers: one, directed by Ruth E. Morgan, consisting of members of the staff of the Library of the University of Chicago; the other, directed by Harriet B. Prescott, consisting of members of the staff of Columbia University. Funds for the payment of these and a few other paid readers were most generously provided by the National Research Council and by the Carnegie Foundation, to which bodies we hereby express our hearty thanks.

The Association of American Colleges examined for us its own *Bulletins* and *Proceedings;* the Association of American Universities

its own *Proceedings;* the Carnegie Foundation its own *Annual Reports* and *Bulletins;* and the National Association of State Universities its own *Transactions* and *Proceedings.* To these several bodies we hereby express our hearty thanks.

The Catalogues and Presidents' Reports (and, in certain cases, other publications) of Lafayette College, the University of Minnesota, the State University of Nevada, Northwestern University, Princeton University, the University of Tennessee, Tufts College (in part), Union University, the State College of Washington, Wesleyan University, Williams College, and the University of Wyoming were examined for us by committees or representatives of the Chapters of this Association in the institutions concerned. To these committees and representatives we hereby extend our hearty thanks.

The members of this Committee have themselves also participated in the examination of the material.

## PART I

### A. Books of General Importance

1. Adams, C. F. Three Phi beta kappa addresses. Boston and New York, Houghton, Mifflin and company, 1907.
2. Allen, W. H. Self-surveys by colleges and universities. Yonkers-on-Hudson, World book company, 1917.
3. The American college. . . .with introduction by W. H. Crawford. New York, H. Holt and company, 1915.
4. Babbitt, I. Literature and the American college. Boston and New York, Houghton, Mifflin and company, 1908.
5. Baker, J. H. American university progress. New York, Longmans, Green and co., 1916.
6. Benton, G. P. The real college. Cincinnati, Jennings and Graham, 1909.
7. Birdseye, C. F. Individual training in our colleges. New York, The Macmillan company, 1907.
8. Birdseye, C. F. The reorganization of our colleges. New York, The Baker & Taylor company, 1909.
9. Boraas, J. Teaching to think. New York, The Macmillan company, 1922.
10. Boswell, F. P. The aims and defects of college education. New York, G. P. Putnam's sons, 1915.

11. Bourne, R. S. Education and living. New York, The Century co., 1917.
12. Bowker, R. R. Of education. Boston and New York, Houghton, Mifflin and company, 1903.
13. Briggs, L. B. R. Routine and ideals. Boston and New York, Houghton, Mifflin and company, 1904.
14. Briggs, L. B. R. School, college and character. Boston and New York, Houghton, Mifflin and company, 1901.

Brumm, J. L. *See* **131.**

15. Bryce, J. University and historical addresses. New York, The Macmillan company, 1913.
16. Butler, N. M. Scholarship and service. New York, C. Scribner's sons, 1921.
17. Canby, H. S. College sons and college fathers. New York, Harper & brothers, 1915.
18. Canfield, J. H. The college student and his problems. New York, The Macmillan company, 1902.
19. Cattell, J. M. University control. New York, The Science press, 1913.
20. Caullery, M. J. G. C. Universities and scientific life in the United States. Cambridge, Harvard university press, 1922.

Civilization in the United States. *See* **62.**

21. Clark, T. A. Discipline and the derelict. New York, The Macmillan company, 1921.

College life. *See* **35.**

College teaching. *See* **49.**

22. Cooper, L. Two views of education. New Haven, Yale university press, 1922.

Crawford, W. H. *See* **3.**

23. Dewey, J. Democracy and education. New York, The Macmillan company, 1921.
24. Dewey, J. The educational situation. Chicago, The University of Chicago press, 1902.

*See also* **45.**

Educational problems in college and university. *See* **131.**

25. Eliot, C. W. Academic freedom. Ithaca, Press of Andrus & Church, 1907.
26. Eliot, C. W. The training for an effective life. Boston, Houghton Mifflin company, 1915.

27. Eliot, C. W. University administration. Boston and New York, Houghton, Mifflin company, 1908.
*See also* 57.
28. Emerton, E. Learning and living. Cambridge, Harvard university press, 1921.
29. Erskine, J. Democracy and ideals. New York, George H. Doran company, 1920.
30. Erskine, J. The moral obligation to be intelligent. New York, Duffield and company, 1921.
31. Ewer, B. C. College study & college life. Boston, R. G. Badger, 1917.
32. Flexner, A. The American college. New York, The Century co., 1908.
33. Foster, W. T. Administration of the college curriculum. Boston, Houghton Mifflin company, 1911.
34. Foster, W. T. Should students study? New York, Harper & brothers, 1917.
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60. Showerman, G. With the professor. New York, H. Holt and company, 1910.
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70. The Century illustrated monthly magazine.
71. Education.
72. Educational administration & supervision.
73. Educational review.
74. The Forum.
75. The Freeman.
76. Harper's monthly magazine.
77. The Journal of educational psychology.
78. The Nation.
79. The New republic.
80. The North American review.
81. The Popular science monthly.
82. School and society.
83. The School review.
84. Science.
85. Scribner's magazine.
86. The Weekly review.
87. Yale review.

C. EDUCATIONAL BODIES (other than Universities and Colleges), PUBLICATIONS

*American Association of Collegiate Registrars*

88. Proceedings of the annual meeting.

*American Association of University Professors*

89. Bulletin.

*Association of American Colleges*

90. Bulletin.
91. Proceedings.

*Association of American Universities*

92. Journal of proceedings and addresses.

*Carnegie Foundation for the Advancement of Teaching*

93. Annual report.
94. Bulletin.

*National Association of State Universities in the United States of America*

95. Transactions and proceedings.

*National Education Association of the United States*

96. Journal of proceedings and addresses.

*U. S. Bureau of Education*

97. Report of the commissioner.
98. Bulletin.
99. Higher education circular.

## D. Universities and Colleges, Publications (Official and Unofficial)

(In each case in which no date is given, the publication in question has been examined for the entire period 1901–22, or for the entire portion of that period during which the publication has been issued.)

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101. Report of the president.
102. Amherst graduates' quarterly.

*Brown University*

103. Catalogue (1921–22).
104. President's report (1921–22).
105. The Brown alumni monthly.

*The University of California*

106. The University of California chronicle.

*The University of Chicago*

107. Annual register.
108. The president's report.
109. The Chicago alumni magazine.
110. The University of Chicago magazine.

*Columbia University*

111. Catalogue.
112. Annual reports of the president and treasurer.
113. Columbia university quarterly.

*Cornell University*

114. The president's report (1909–10).
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118. Catalogue.
119. Reports of the president and the treasurer.
120. The Harvard graduates' magazine.

*The University of Illinois*

121. Report of Special senate committee on standards of scholarship in the student body. *Its* Bulletin 13, no. 42, June 19, 1916.

*The State University of Iowa*

122. Catalogue.
123. Studies in education, Vol. 1.

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124. The Johns Hopkins alumni magazine.

*The University of Kentucky*

125. Report of the Investigating committee. . . .Report of the Survey commission. *Its* Bulletin 9, no. 5, July, 1917.

*Lafayette College*

126. Catalogue (1900–01, 1913–14, and 1921–22).
127. Annual report (1916–17 and 1920–21).

*The Leland Stanford Junior University*

128. Annual register.
129. Annual report of the president.

*The Massachusetts Institute of Technology*

130. The Technology review.

*The University of Michigan*

131. Educational conference, 1920. Educational problems in college and university. Ed. by J. L. Brumm. 1921.

*The University of Minnesota*

132. The annual register.
133. The president's report (*In its* Biennial report of the Board of regents).
134. Bulletin of the College of science, literature and the arts (1920–21 and 1922–23).
135. Coffman, L. D. The university and the commonwealth, Inauguration address, 1921.

*The State University of Nevada*

136. Annual register.
137. Report. . . .containing biennial reports of the president.

*The University of North Carolina*

138. Catalogue.
139. President's report.

*Northwestern University*

140. Annual catalogue.
141. President's annual report.

*Oberlin College*

142. Annual reports of the president and treasurer (1908–09).
143. Report of the Committee on tests of college efficiency. *In* Bulletin of Oberlin College. N. s. no. 56 (1909), 135–206.

*Princeton University*

144. Catalogue.
145. Annual reports of the president and treasurer.
146. The Committee of eight. The preceptorial method of instruction. 1913.
147. The Preceptorial committee. The preceptorial method of instruction. 1914.

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149. Report on the proseminaries. 1907.
150. Princeton Alumni weekly.
151. The Committee of fifty. Princeton University, some characteristic features. 1906.
152. Princeton alumni association of the Oranges. Princeton, some features of college life. New York, 1909.
153. Princeton '96. Decennial record. 1906.

*Smith College*

154. Catalogue (1921–22).
155. Annual report of the president (1920–21 and 1921–22).

*The University of Tennessee*

156. Register.

*Tufts College*

157. Annual catalogue (1921–22).
158. Publications (1902–03).

*Union University*

159. Annual catalogue.
160. Reports of the president.
161. Reports of the secretary.
162. Union alumni monthly (1922).

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165. Catalogue.
166. President's report (*In its* Bulletin).

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168. President's report.
169. Williams college alumni review (1921).

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171. President's report.

172. Faculty regulations.
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## PART II

In the headings throughout Part II the introductory words "References to discussions of" are to be understood in each case. Single letters and Roman numerals represent groups of methods. Arabic numerals represent individual methods. Parentheses indicate that no references are given for the particular group in question as a whole, and that such few references as are applicable to the group as a whole are repeated under each of the appropriate subdivisions. Square brackets indicate that references are not given here, and that bibliographies for the methods in question may be found in special reports on those methods already published, or soon to be published, by this Committee. In the case of reports already published, the place of publication is indicated in a footnote.

In the lists of references, bold-face numerals represent the several works listed in Part I; numerals in italic type represent volume numbers; and numerals in Roman type represent pages or (in certain obvious cases) dates or other data.

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The entire subject: methods of increasing the intellectual interest and raising the intellectual standards of undergraduates.

**3** 125–30. **50**. **68** *1* 404–12. **69** *103* 189–200; *129* 642–50. **70** *93* 479–80. **71** *29* 503–7; *30* 617–31; *33* 373–4; *35* 620–7. **73** *43* 77–80; *59* 368–80. **74** *30* 583–94. **75** *5* 201–3. **76** *126* 592–8. **78** *85* 511; *93* 116–7; *114* 344. **81** *82* 397–411. **82** *1* 530–2, 626–30; *3* 181–6; *16* 589–600. **83** *23* 97–104. **84** *30* 505–16. **86** *3* 245–6. **87** n.s. *5* 105–16. **89** *7* April 11–7. **97** 1919 *1* 93–4. **98** 1913 no.4. **176** *10* 356–60.

1. The development in all concerned, including the undergraduate, of a common sense of the purpose of undergraduate education.[1]

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[1] This list includes references to discussions of the purpose of undergraduate education as well as references to discussions of the development of the sense of that purpose

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(A. The maintenance and development of the quality of the intellectual life of the instructing force.)

2. The development on the part of those in administrative authority of a realization that the value of an instructor is determined primarily by the quality of his intellectual life.

**5** 80. **19** 104, 193, 219, 248. **27** 99, 102. **32** 180–9. **35** 36–7. **37** 175–8. **43** 184–5. **46** 258–60. **49** 32, 40–1, 80–1. **51** 110. **60** 72–4. **61** 10, 360. **63** 50. **68** *1* 207–8. **71** *26* 320–1; *39* 36–45. **73** *31* 55–66, 139–40, 223–5, 328–32; *38* 519–20; *44* 1–12, 249–56; *48* 321–2; *49* 458; *52* 69; *58* 400–12; *59* 226–35. **74** *33* 270–82; *50* 445–63. **76** *123* 136–7; *139* 109; *142* 733–5. **77** *2* 3, 106–7; *4* 373. **78** *89* 203–4; *93* 332; *99* 73. **79** *22* 411. **81** *69* 390–7; *78* 275; *79* 158–9; *82* 80, 410, 510–5; *84* 451–5. **82** *1* 689; *15* 40. **83** *11* 119; *12* 494–5; *15* 29. **84** *20* 44–7; *23* 561–74; *25* 241–59; *28* 88–9; *30* 514–5; *33* 245–6, 406–7; *34* 699; *36* 21–2; *37* 630; *38* 321, 324, 442, 909, 911, 917; *39* 496; *40* 465, 468, 730, 855; *41* 930; *42* 330, 819; *51* 12, 133, 136, 145–6. **85** *65* 191. **86** *2* 198. **89** *7* Jan.-Feb. 17–9; *8* Nov. 64–5. **92** *18* 29; *21* 60; *22* 89. **95** *2* 95–7, 98–100; *3* 22–3; *8* 201–12; *11* 155–62; *14* 154–7; *17* 49; *20* 30. **96** *40* 372–3; 1906: 340; *45* 727; *46* 683, 467; *47* 199; *48* 537; *49* 194; *52* 60–1; *53* 123; *58* 234–5. **97** 1902 *1* 776–7; 1909 *1* 497–8; 1912 *1* 111; 1913 *1* xli. **98** 1917 no.16: 183–4; 1917 no.19: 68–9; 1921 no.8: 134. **106** *13* 432–3. **108** 1906–7: 19. **110** *3* 131, 133–4. **112** 1914: 19–20; 1921: 23–35. **113** *4* suppl. 19–20. **115** 8. **120** *13* 404–7. **139** 1916: 23–4. **215** 103.

AI. A, as applied to the present instructing force.

**9** 265–8, ch. XIV. **22** 182–218. **63** 10–1. **71** *35* 660–2. **73** *31* 325–6; *32* 7–14; *44* 215. **84** *40* 891–2; *42* 821. **89** *7* Nov.-Dec. 37–41; *8* Feb. 19–22. **102** Aug. 1921: 344–5. **119** 1918–9: 20–1.

AIa. AI, as applied specifically to those whose intellectual life is of at least normal quality.

**2** 325–33. **19** 93, 98, 450–1. **25** 5–6. **41** 290. **51** 430–4. **55.** **73** *28* 464–7. **82** *9* 735–7. **95** *10* 178–86. **97** 1903 *1* 260–1. **105** *13* 202–3. **106** *4* 123. **139** 1904: 11. **142** 152, 160–1, 183–5. **215** 103–6. **221** 1–4. **255** 365–79.

3. Intellectual association with other men—colleagues, the ablest students, members of the community.

**27** 151. **28** 43–4. **32** 180–9. **35** 206. **39** 228–9. **50** 31–2. **51** 284. **61** 452–6. **73** *45* 325–38; *46* 47–51; *49* 300. **78** *86* 277–8. **81** *79* 156–8. **82** *4* 295; *11* 609; *14* 296. **84** *33* 402; *39* 491; *41* 149; *42* 821; *51* 17, 34–6; *52* 46. **89** *6* Apr. 10–1. **92** *17* 55. **96** *40* 375; *59* 105. **97** 1906 *1* 84. **104** 85–6. **106** *4* 293–4; *5* 196–207. **107** 1920–1: 387. **112** 1901: 65; 1906: 21–2, 34; 1907: 10–1, 27–9, 34; 1908: 2–3; 1914: 19–20. **119** 1913–4: 20; 1915–6: 23. **120** *10* 24–241. **125** 61. **133** 1918–9: 89–90. **139** 1909: 8–9; 1913: 11. **140** 1913–4: 64; 1914–5: 64–5. **166** Bull. 71(v.15,no.4): 8; Bull. 73(v.16,no.5): 7–9. **171** 1921–2: 11. **182** 5–6. **215** 107–9.

4. Temporary exchange of instructors between different institutions.

**19** 417. **32** 180–9. **43** 165. **47** 321–2. **65** 240–1. **73** *32* 382–3; *37* 3, 11, 307; *42* 60–70; *45* 70–86; *47* 28–56. **78** *84* 492, 519, 560–1; *94* 587; *96* 387, 466. **81** *78* 516–7. **82** *3* 747; *5* 464; *7* 197; *9* 35, 326, 713; *10* 195–6, 463, 579; *13* 384; *14* 81. **83** *19* 566–7. **84** *33* 521–2; *38* 589, 845; *39* 506, 509, 719; *40* 515, 522; *42* 88, 825; *43* 447; *49* 369–70; *52* 286. **89** *5* Oct. 5–7. **92** *7* 14–23; *20* 34–6, 40, 50. **93** *3* 46–9. **95** *6* 270. **96** *40* 375; *53* 52; *56* 201, 204; *59* 416. **97** 1902 *1* 659–60; 1904 *1* xv; 1908 *1* 33–7; 1909 *1* 94, 209–10; 1910 *1* 164–7; 1911 *1* 262, 291–4; 1912 *1* 617; 1913 *1* 841. **98** 1917, no. 15: 115; 1918, no. 6:112. **106** *4* 125–6; *24* 361. **108** 1913–4:10. **110** *5* 68, 313. **112** 1901:12; 1906:23–8; 1907:9–12; 1908:25; 1910:36–7; 1911:14–25; 1913:17–20. **119** 1904–5:45–8; 1906–7:26–7; 1910–1:20–2; 1920–1:28, 35. **120** *19* 636–7; *26* 224–5. **133** 1919–20:71–2. **139** 1916:14. **206** 731–2.

5. Intellectual stimulation through general reading.

**25** 12. **28** 134. **32** 180–9. **35** 322ff. **47** 203–5. **71** *25* 627–8; *26* 280–2. **83** *11* 181. **84** *38* 138. **96** *40* 375. **112** 1907:23.

6. Interest and participation in discussion, written and oral, and in the experimental solution, of the problems of undergraduate education.

**9** ch. XIV, 269–70. **27** 122. **28** 6–9. **32** 180–9. **43** 12–9, 103–4, 187–8. **61** 190–1. **65** 236–7. **67** 41–4. **73** *43* 101–5; *44* 536–8; *47* 210–3. **74** *50* 445–63. **77** *1* 1–3, 174–7; *3* 96–8, 167–8, 191–7; *5* 229–33; *8* 2, 50–2, 248; *9* 471–2; *10* 405–6. **82** *1* 323–4; *4* 423–33. **84** *31* 721–8; *38* 114–20, 430–1, 909; *39* 458, 536, 648, 870; *40* 744; *41* 149; *42* 724; *53* 250–2. **92** *23* 66. **95** *9* 138–48. **96** *40* 375; *50* 214–5. **97** 1903 *1* 260. **98** 1917, no. 16:165, 168. **106** *4* 293–4; *5* 196–207; *9* 243; *13* 434. **107** 1920–1:387. **110** *1* 22; *10* 249–50. **112** 1906:37–9; 1907:19, 23, 27; 1908:10–3, 25–9; 1910:46–7, 53–5. **120** *12* 403–4. **130** *7* 159. **139** 1921–2:13. **172** 1922. **223** 76–7. **239** Nov. 12, 1922. Reprinted sheet.

7. Establishment of a periodical devoted to the problems of college education.

**27** 77. **73** *43* 537–40. **77** *5* 607–8. **96** 1906:339. **97** 1902 *1* 611–2; 1909 *1* 94. **112** 1901:36–7; 1907:13–6, 29, 34; 1908:30; 1910:33; 1913:11–2. **139** 1913:10.

[8. Extracollegiate service of proper character and in proper measure.]

9. Maintenance of moral vigor.

**7** 149–56. **43** 112–7. **50** 127–34. **56** 171–86. **60** 186–91, 193–204, 207–38. **69** *88* 483–5. **73** *23* 2–3, 6; *32* 394–401; *37* 498–500; *47* 291–4; *53* 459–64; *61* 191–4. **74** *33* 270. **76** *126* 782–7. **80** *201* 736. **82** *2* 469–70; *12* 12. **83** *9* 354. **84** *38* 139, 917; *51* 323. **85** *71* 575–6. **89** *7* Nov.-Dec. 32–3. **95** *17* 44–8. **96** *40* 628; *42* 530–1; *52* 494–5. **112** 1918:42–4. **131** 84. **245** 20.

10. Maintenance of physical vigor.

8 344. 10 11. 28 30–2. 71 *24* 38–42; *25* 207–8. 76 *126* 782–7. 82 *12* 12; *13* 128–35. 84 *38* 138; *51* 27. 97 1909 *1* 93. 245 19–20.

(AIb. AI, as applied specifically to those whose intellectual life is of subnormal quality.)

11. Special classification.

73 *64* 68–73. 84 *24* 132. 200 May 22:4.

12. Elimination.

2 63–4. 6 149–50. 40 105, 115–6. 51 214–5. 53 8–9, 44–5. 66 172–80, 252. 69 *97* 39. 71 *27* 8. 73 *47* 313–6; *64* 68–73. 78 *87* 646–7; *88* 186–7; *89* 204. 82 *5* 668–71; *13* 26, 693. 83 *12* 238, 788; *15* 764. 84 *24* 132; *33* 245–6, 728–9, 961–2; *34* 489. 89 *7* Jan.-Feb. 17. 95 *3* 23–5; *14* 208. 96 *42* 520; *47* 201. 112 1910:20–24. 200 May 22:4. 210 932–3.

(AII. A, as applied to the future instructing force.)

13. Application of the methods of improving conditions of undergraduate work and life entered under B and C.

67 47–64. 70 *81* 600–12. 72 *7* 388–400. 73 *43* 134–54, 217–35, 443–8; *45* 58–69, 184–6, 210–4, 433–43, 538–9; *46* 31–8, 109–34; *47* 217–36; *48* 95–9, 202–7, 300–4, 306–7; *64* 68–73. 74 *33* 33–45. 77 *2* 122–4; *3* 303–15, 600; *4* 179–80. 81 *74* 588–95. 82 *4* 423–33. 83 *15* 764. 84 *15* 330–9. 95 *8* 262–86; *10* 26–34, 256–99. 97 1902 *1* 661–2. 98 1915, no. 6:5. 103 42–4. 108 1921–2: 7–9. 113 *6* 247, 254; *17* 301–15. 122 1921–2:103–10. 131 159–74. 136 *34* 98–101. 139 1921–2:54–63. 144 1921–2:213–7. 145 1922:41–2. 167 1921–2: 104–8.

[14. Recruiting for the teaching profession of undergraduates who show notable promise of the development of intellectual life of high quality.]

15. Training in the graduate school with a view to development along the lines indicated in methods 1, 3, 5, 6, 8–10.

22 226–33. 27 169. 49 176–8. 60 172–206, 281–2, 284. 71 *40* 551–8. 73 *22* 502; *46* 473–91; *47* 444–56; *49* 116; *59* 226–35; *64* 68–73. 77 *1* 287–92; *2* 23–34; *11* 65–7. 82 *1* 50–3; *4* 423–33, 429–31. 83 *9* 193. 84 *33* 217. 92 *22* 84–91. 93 *5*, 57–62. 95 *8* 262–86. 96 *46* 464, 694; *52* 388. 97 1902 *1* 648–9. 98 1915, no. 6:5. 107 1920–1:387. 110 *1* 60. 112 1914:18–9; 1918: 22–5. 131 159–74. 184 33. 242.

16. Pedagogical training.

5 57–8. 33 102. 49 18, 31–9, 48, 81. 54 71–4, 76–7. 68 *2* 218. 71 *23* 28–31, 326–9; *40* 551–8. 73 *40* 110; *46* 98–101; *49* 117, 410; *59* 447–9; *60* 62–6; *64* 68–73. 77 *1* 171–3; *3* 296–7; *5* 423–4. 81 *74* 588–95. 82 *1* 50–3, 246, 777–80; *2* 167–9; *3* 243–5, 697–701; *4* 423–33; *5* 456–9; *7* 1–8, 369–74; *9* 552–6; *11* 724; *12* 476; *13* 59–60, 111, 114–6, 143–4, 163, 206–9, 234–5, 494–7;

*15* 40; *16* 253–6. **83** *9* 128–9; *11* 535–6; *12* 190; *14* 71; *15* 763; *16* 162–70; *17* 593–608; *18* 388–92; *19* 567. **84** *30* 460–2; *33* 217; *40* 734. **92** *22* 88–9. **95** *3* 25–8; *5* 65–75. **96** *40* 373; *45* 750; *46* 463, 694. **97** 1902 *1* 648–9, 658; 1909 *1* 93. **98** 1915, no. 6: 5; 1921, no. 8: 129–30. **107** 1920–1: 248, 374–410. **108** 1902–4: 77; 1906–7: 45–6. **110** *1* 60–4; *11* 332. **113** *9* 281. **130** *3* 385–6. **131** 159–74. **142** 159–60.

17. Selection of instructors with regard primarily to the quality of their intellectual life.

**2** 251–3. **4** 106–11, 132–3. **9** 3. **17** 64–5. **27** 90–1. **46** 39–40, 62–4, 87–98, 162–3, 185–90. **48** 61–2. **53** 9, 45, 74–5. **54** 55–6, 75–9, 81, 92–6, 103. **55** 16–20. **60** 162–4, 167–8. **61** 116. **71** *31* 602, 605; *32* 581–2. **73** *21* 4–6; *23* 347; *24* 262; *46* 433–7; *64* 68–73. **77** *12* 425 ff. **82** *1* 50–3; *7* 53–4, 382–7; *9* 388–9, 419. **83** *9* 128–9, 314–5, 574; *12* 396, 786; *14* 709; *15* 128, 765. **84** *33* 217; *38* 913. **92** *12* 50; *19* 63; *22* 90. **95** *7* 42–4; *14* 209–10. **96** *43* 138–9; *44* 63; *45* 82, 135; *46* 691; *47* 538; *48* 539; *51* 504; *52* 65; *59* 105. **97** 1902 *1* 575, 577, 618, 629. **98** 1915, no. 6: 5; 1917, no. 15: 110. **106** *23* 248–9. **110** *1* 58; *11* 333. **112** 1918: 22–5; 1922: 26–7. **115** 7. **131** 159–74. **142** 159–60. **175** 133. **210** *92* 931–4.

B. Controlling the conditions of instruction and of curricular administration in such a way as most to favor the stimulation of the intellectual life of the undergraduate.

**35** 128–37. **46** 33–5. **69** *102* 603–11. **71** *31* 409. **73** *21* 462–74; *23* 407–19; *26* 109–19; *27* 77–82, 384–94; *28* 229–39, 461–72; *37* 456–67; *41* 60–70; *55* 1–10; *58* 120–9. **84** *39* 508–9. **89** *8* March 31–4. **96** *43* 136; *49* 197, 661. **97** 1910 *1* 493. **110** *3* 83. **215** 108–9. **235** 225–38.

BI. B, as applied to conditions of instruction.

**5** 160, 181. **9** 15, ch. XII. **36** 105–10. **49** 49–55, 63–72. **56** 67–93. **61** 516–20. **69** *103* 838–44. **71** *22* 604–17. **73** *31* 261–2; *32* 374–7; *36* 67–78; *38* 518–20. **82** *2* 782–5; *16* 292–4. **83** *10* 371; *24* 574–83. **84** *28* 657–65; *29* 406–7; *30* 502–3. **89** *8* Oct. 59–62. **92** *23* 65–6. **96** *45* 391. **97** 1909 *1* 93–4; 1911 *1* 47. **98** 1911, no. 7: 20–2. **105** *4* 185–8; *10* 141–5. **119** 1903–4: 12–3; 1904–5: 19–20; 1912–3: 77; 1913–4: 11–2, 63–6; 1914–5: 11; 1915–6: 11–4; 1920–1: 40. **121** II. 490–540. **142** 120, 152, 189. **197** 614. **229** 63–76.

[18. Maintenance of intellectual discipline in the individual courses.]

19. Improvement of class-room procedure: companionable study preferable to the formal lecture.

**2** 270–4. **5** 50, 83, 163. **6** 157–9. **7** 181, 263. **9** ch. IV, VI. **10** 26–7. **11** 232–4. **12** 58. **16** 128–30, 134–8. **22** 219–26. **27** 111, 164, 178. **32** 193–214, 228–9. **39** 164, 213–4. **41** 291, 301, 307–8. **42** 128–9. **48** 53–4. **49** 73–80, 242–3. **54** 67–8. **55** 12–3, 22–4. **56** 94–110. **65** 268. **67** 117–9. **69** *97* 443. **70** *83* 519–23. **71** *25* 465–7; *27* 68, 105–7, 342; *29* 179–86, 226–32, 327–8; *30*

427–9, 621; *31* 21–31, 249–56, 466–71, 597–607; *32* 51–7; *36* 1–10; *39* 79–83. **73** *23* 345–7; *24* 484–96; *32* 435–6; *37* 215–6, 399–405; *39* 247–9; *40* 222, 332; *44* 35–44; *49* 399; *51* 152; *52* 57–70; *53* 497–503; *55* 65–70. **77** *1* 25–30; *3* 1–17; *4* 381–92; *6* 122–3; *9* 381–7. **78** *93* 236; *106* 538–9. **79** *4* 87–8; *17* 131–2; *27* 104–5, 157–8, 325. **81** *82* 77. **82** *2* 153; *3* 91–5; *4* 393–7; *5* 121–6; *11* 59, 485; *13* 494–7; *16* 36–7, 218–21. **83** *9* 569; *10* 483–4; *11* 182–3, 193; *12* 310–1; *13* 540–3; *16* 414. *20* 337–8; *26* 49–50; *30* 382–7. **84** *30* 462–5; *37* 929–31; *40* 734; *43* 622–5; *44* 2–3. **85** *60* 80. **92** *10* 61; *11* 88. **95** *5* 20–1; *6* 293–309; *7* 127–36. **96** *47* 541. **97** 1910 *1* 493; 1911 *1* 579, 582; 1914 *1* 681. **98** 1911, no. 7: 19; 1917, no. 15: 114; 1918, no. 6: 110–1. **102** *2* 309–15. **105** *6* 146–7; *10* 142; *13* 62. **106** *23* 247; *6* 49. **109** *1* 103; *3* 60–4, 66–7. **112** 1901–2: 24–6; 1902–3: 38, 40; 1906–7: 20–3, 28; 1907–8: 26, 32; 1909–10: 30, 55–6; 1911–2: 26–7; 1913–4: 21–2; 1916–7: 19, 37; 1917–8: 25–7. **113** *20* 333–4. **119** 1901–2: 21–2; 1902–3: 95; 1903–4: 87–8; 1912–3: 77; 1915–6: 13–5; 1916–7: 17; 1920–1: 19–21. **120** *13* 402–4; *24* 494–6. **130** *7* 152. **160** 1913–4: 9; 1914–5: 9; 1921–2: 10. **176** *24* 310–1, 753–4. **179.** **185** 1–74. **200** Apr. 27: 4; Aug. 19 (Educational number) 6–7. **207.** **209** 890. **211** 120–1. **238.** **246.** **254.** **255** 600.

[20. The preceptorial system.]

[21. Practical training of young instructors by experienced teachers in the same department.]

[22. Pedagogical supervision of young instructors.]

23. Giving definite directions as to methods of individual study.

**2** 283–4. **5** 40, 160, 182. **7** 259. **17** 178–82. **31** 82–3, 93–6. **42** 126–34. **63** 228–33. **69** *104* 555–6. **71** *25* 503–4. **73** *32* 147–51; *44* 45–54; *48* 1–20; *55* 65–70. **77** *8* 118; *11* 193–206. **78** *95* 558–9. **82** *2* 100–7, 554–7, 824–8; *4* 961–2; *5* 125–6; *13* 207. **83** *9* 299; *10* 476–7; *12* 238, 310–1; *14* 168–9, 172–3; *16* 311–2; *27* 92–3, 95–6. **84** *38* 915. **88** *11* 20. **95** *17* 54–9. **97** 1905 *1* 539; 1908 *1* 239–40. **98** 1911, no. 7: 20–1; 1921, no. 8: 135–6. **105** *13* 121. **112** 1903: 18; 1910: 42. **119** 1913–4: 74; 1914–5: 17. **121** ll. 444–54. **133** 1912–3: 96; 1914–5: 15. **139** 1913: 21. **160** 1911–2: 7. **161** 1914–5: 20; 1919–20: 25. **166** Bull. 71 (v. 15, no. 4): 12–3. **177** *8* Suppl. Feb. 1914: 328–33, 352–6. **191** June 23, 1921. **193.** **249.** **253.**

24. Supervised study in non-laboratory subjects.

**2** 206–8. **9** 211–2, 245–6. **10** 30. **16** 129–30. **31** 84–7. **41** 308. **43** 179–80. **69** *104* 553–5. **73** *44* 157–73, 430–1; *45* 507–8; *55* 65–70. **78** *95* 558–9. **83** *12* 310–1. **98** 1921, no. 8: 135–6. **106** *6* 48–50. **121** 414–40. **126** *90* 79–80. **160** 1912–3: 12. **177** *8* Suppl. Feb. 1914: 339–52. **191.**

25. Improvement of character and control of collateral reading and writing.

**7** 259. **9** 211, 246–9. **12** 97–8. **16** 151–2, 189. **27** 180, 183. **31** 84–7. **71** *41* 534–6. **73** *45* 407–9; *46* 188–90. **77** *10* 357–76. **78** *95* 558–9; *100* 431.

79 Suppl. Oct. 25, 1922: 13. **81** *82* 83. **82** *16* 71. **83** *10* 320; *11* 113–4; *13* 657. **85** *49* 377. **95** *17* 52–3. **96** *42* 57. **97** 1905 *1* 539. **102** Nov. 1922: 8–12. **105** *2* 31–3; *6* 169; *13* 62. **119** 1913–4: 12; 1914–5: 17; 1915–6: 13–4. **120** *23* 252–4; *25* 41–2. **227** 52–7.

[26. English method of reading in vacation for examinations.]

[27. Improvement with regard to methods of testing growth in knowledge.]

28. Relating individual courses to problems of the present day.

**2** 31–2, 115, 228–9. **4** 110–2, 133, 168, 177–8. **5** 180–1, 183. **9** 3, 180, ch. VIII, X. **11** 234–6. **23** 324–39. **31** 62–9. **32** 104–8. **33** 99–100. **35** 248. **42** 143–8. **43** 34–42, 138–9, 142. **45** 89–90. **46** 10–2, 45–66, 128–38, 150, 172–6. **47** 297–8, 314. **49** 34, 55–63. **66** 185–90. **69** *127* 391–3, 666–9. **70** *88* 51–5; *98* 661–3. **73** *37* 152–9; *43* 207–8; *45* 427–9, 483–500; *49* 53–4; *61* 189–91, 283–4. **74** *32* 244–54; *48* 705–12. **78** *84* 336–7. **79** *4* 134–5; *32* 324–5; Suppl. Oct. 25, 1922: 10. **80** *207* 239–43; *210* 778–86; *215* 249–54. **81** *82* 76–84. **82** *8* 421–5, 451–61, 661–72; *9* 757–63; *10* 173–5, 223–4, 388–93, 430–3; *11* 291, 512; *12* 640; *13* 511–7; *16* 35. **83** *9* 94, 191–2; *10* 367, 750, 754; *11* 195, 528; *14* 28, 301; *18* 387; *19* 474–5; *24* 768. **84** *29* 361–8; *35* 637; *37* 779; *38* 347–55, 431, 435, 494, 608–9, 758; *40* 698; *46* 326–7; *51* 65, 129. **88** *9* 126. **89** *7* May 45–7. **92** *19* 31. **95** *5* 163–70; *7* 37–40; *12* 262–72. **96** *40* 168, 624; *42* 343–4; *45* 728. **97** 1902 *1* 628; 1914 *1* 413–4. **102** *1* 16–21. **106** *18* 488; *21* 301. **108** 1916–7: 53, 113, 154; 1917–9: 171. **110** *8* 264–5; *9* 248. **112** 1905: 4, 19, 22–4; 1910: 51–2; 1911: 2–3, 48–9, 52; 1914: 24–7, 29–30; 1915: 9; 1918: 28–9. **119** 1915–6: 9–11, 13. **120** *23* 14–8. **126** *90* 65–7. **130** *16* 177. **131** 48–50, 241–67. **133** 1918–9: 90. **142** 158. **160** 1915–6: 11, 13. **177** 310–4. **182** 7. **196.** **213.** **214.** **216** 367. **219.** **226** 184–5 **230.** **240.**

[29. Establishment of special courses on problems of the present day.]

30. Establishment of inter-departmental courses.

**19** 144. **43** 55, 107, 167–9. **47** 297–8. **71** *29* 175–8. **73** *45* 427–9. **78** *95* 407. **79** Suppl. Oct. 25, 1922: 4–5. **80** *210* 778–86; *215* 249–54. **82** *8* 145–7. **83** *9* 190–1; *12* 787; *14* 391, 409. **84** *42* 750–1; *51* 193–4; *52* 562. **96** *42* 323, 503; *44* 789; 1906: 74; *49* 195. **97** 1914 *1* 188–9. **112** 1905: 25.

[31. Special initiatory course for freshmen.[1]]

32. Special care given by the individual instructor to the development of his ablest students.

**2** 117–8. **4** 105, 198. **5** 82–4. **17** 145–51, 155. **27** 172. **34** 50. **46** 107. **47** 290–5. **73** *28* 175; *39* 263–4; *40* 225–8; *55* 66. **76** *131* 423–8; *142* 728–36; July 1921 Remarks on R. W. Brown's article under heading "Personal

[1] The committee's report on this subject was published in the BULLETIN of the Association for October, 1922. Reprints may be obtained from the Secretary of the Association at the cost of ten cents a copy.

and otherwise." **77** *11* 165–6, 229–31; *12* 33. **78** *93* 117; *97* 479. **82** *5* 31–5, 391–401, 421–30, 440–1; *8* 61–8, 402–6; *9* 556–9, 697–705; *10* 274–5, 724–7; *13* 418–20, 432–4, 481–94; *14* 387–92, 439–47, 547–8, 564–7; *16* 36. **84** *37* 147; *38* 761, 917; *42* 369, 821. **89** *8* March 11–5, 30–1; May 44–5; Oct. 52–5. **92** *16* 62, 69–70; *18* 34; *23* 68. **95** *20* 19, 29. **96** *60* 750–2. **97** 1905 *1* 540. **105** *6* 168–9; *9* 3. **106** *13* 141–5; *21* 301–8; *23* 375, 381–2. **109** *1* 100. **112** 1912: 25, 47. **113** *9* 53–4. **114** 7, 23–4, 26. **119** 1912–3: 78; 1914–5: 10. **130** *24* 214–6. **139** 1920–1: 29; 1921–2: 43. **200** May 19: 4. **211** 130, 139. **255** 375.

### BII. B, as applied to conditions of curricular administration.

**10** 24, 33, 36. **25** 15–17. **39** 171–2, 183, 185, 212–4, 217. **41** 287, 300–5. **47** 278–88. **55** 24. **71** *39* 521–36; *41* 312–9, 477–8. **73** *23* 338–44; *25* 23–4; *26* 120–6, 166–79, 494–502; *27* 60–5, 168–78, 279–92, 497–509; *28* 468–9; *29* 69–71; *31* 135–8; *32* 140–1; *37* 19–28, 326; *45* 339–44. **74** *33* 278–9; *50* 448–9. **77** *8* 250. **80** *204* 413–4, 418–20. **81** *78* 276. **82** *15* 345–53. **83** *26* 576–99. **84** *18* 129–36. **90** *7* no. 3: 48–77; *8* no. 3: 127–34. **95** *20* 30, 38. **96** *60* 737–45. **97** 1905 *1* 9; 1906 *1* 13; 1908 *1* 37, 240; 1909 *1* 88–90, 92–4, 213; 1910 *1* 75–80, 162–3, 167. **98** 1911 no. 7–8; 1913 no. 3: 37. **105** *3* 48–9; *4* 185–8; *5* 69–70; *7* 130; *8* 77–8; *9* 171–2, 217–8; *10* 76, 141–5; *11* 86; *15* 152–3; *20* 1. **119** 1912–3: 8–9; 1914–5: 7–9, 78–84; 1915–6: 16–9, 71; 1919–20: 11–2; 1920–1: 21–3. **120** *23* 14–8. **142** 119, 151, 161–3, 187–8, 190. **197** *32* 614–5. **200** Aug. 19: 7. **211** 123–4, 137, 145–7, 155. **218** 511–3. **236** 17, 19. **239** Nov. 5, 1922, Feature section.

### [33. Improvement of standards for admission.]

### [34. Improvement of standards for retention.]

### 35. Improvement of standards for promotion.

**4** 78–80. **5** 183. **10** 31. **36** 33–45. **38** 109–10, 157–62. **58** 124–6. **73** *29* 325–35; *46* 429–31, 534–7; *50* 52–60; *54* 225–36. **76** *142* 731–3. **78** *88* 324–6. **80** *204* 418–20. **81** *78* 578–80. **82** *1* 32–5, 338–9; *2* 577–89, 634–6, 924–5; *3* 103–4; *4* 954–5; *11* 131; *13* 523. **83** *30* 722–4. **84** *16* 613–21, 816–9; *29* 372–6. **86** *1* 119. **89** *6* Nov.-Dec. 18–19. **90** *3* no. 3: 63–76. **93** *2* 68. **95** *12* 198–200. **96** *42* 511–2; *55* 304. **97** 1912 *1* 112. **101** 1914: 4. **103** 39–41. **104** 12–3, 59–79. **108** 1915–6: 69; 1921–2: xiv, 24. **110** *3* 285. **112** 1905: 11–2, 22; 1916: 10–4; 1918: 30–1. **118** 1921–2: 185. **119** 1907–8: 108–10; 1910–1: 12–3; 1911–2: 9–10, 80–2; 1912–3: 73–6; 1914–5: 75–6, 80–4. **121** ll. 599–662. **126** *90* 114. **128** *31* 99–101. **131** 132–47. **137** 1921–2: 30. **139** 1906–7: 12–3; 1921–2: 41–2. **140** 1921–2: 91–4. **141** 1913–4: 58–9. **142** 169–70. **144** *175* 130–5. **156** 1921–2: 34–5. **157** 30. **165** 1921–2: 129–30. **167** 1921–2: 60–1. **170** 1922: 53–4. **176** *10* 165–6, 225–6. **206** 737. **229** 71–3. **239** Nov. 5, 1922, Feature section. **244** 836–9.

### 36. Improvement of standards for graduation.

**4** 78–80. **36** 33–45. **38** 109–10, 157–62. **41** 287, 299. **43** 55, 98–9. **47** 362–3. **57** 54. **58** 124–6. **73** *29* 325–35; *46* 415–6, 429–31, 534–7; *50* 13–23, 52–60; *54* 49–53, 225–36. **76** *142* 731–3. **78** *88* 324–6. **80** *204* 418–20. **81**

*78* 276; *81* 578–80. **82** *1* 338–9; *2* 577–89, 634–6, 924–5; *3* 103–4; *4* 954–5. **83** *9* 115–6, 118, 570–1; *10* 224–5; *19* 489–97; *30* 722–4. **84** *29* 372–6. **89** *6* Nov.-Dec. 18–9. **90** *3*, no. 3: 63–76. **92** *5* 59. **95** *3* 78–83; *5* 22, 59–65; *6* 180–257; *8* 250; *10* 45–8, 343–64; *12* 198–200; *14* 160–7; *16* 20–6. **96** *42* 59, 499–500, 503, 511–2; *44* 482–4; *45* 389; *46* 225–6, 468–9; *54* 322; *55* 304. **97** 1902 *1* 658, *2* 2199–208; 1905 *1* 540; 1906 *1* 13; 1912 *1* 112; 1913 *1* xxxix-xl. **98** 1913, no. 4: 68; 1915, no. 6: 5, 7, 16–7; 1917, no. 15: 78–9; 1920, no. 7: 77–246. **100** 1921–2: 67–9. **101** 1914: 4. **103** 32–8. **104** 59–79. **105** *2* 131–3; *3* 78–9; *5* 31; *10* 142; *11* 172; *13* 68. **107** 1901–2: 125; 1920–1; 86–90, 110, 128, 174, 180–1, 225–6, 231, 237–8, 241–2, 247, 258, 262, 419; 1921–2: 125–6. **108** 1921–2: xiv, 24. **110** *3* 285. **112** 1902: 24; 1904: 20; 1905: 13–9, 25, 30; 1906: 32–3, 41; 1908: 12–6, 29, 47–52; 1909: 41–2; 1910: 13–7, 26–7, 30, 37–40, 49; 1916: 10–4; 1918: 30–1. **114** xxxii. **118** 1901–2: 451–9; 1921–2: 185–7. **119** 1904–5: 120–3; 1909–10: 68; 1911–2: 10–4, 27–9; 1914–5: 78–84; 1915–6: 75–6; 1919–20: 11. **120** *17* 772. **126** *90* 113–4. **127** 1920–1: 58. **128** *31* 107–9. **130** *10* 271. **131** 132–47. **133** 1916–7: 67; 1917–8: 71; 1919–20: 102–4. **134** 1920–1: 18. **136** *34* 96–8, 105–7. **137** 1921–2: 30. **139** 1921–2: 44. **140** 1914–5: 90; 1921–2: 91–7. **141** 1913–4: 69; 1920–1: 11–2. **142** 173–4. **144** *175* 43–53. **154** 127–30. **156** 1920–1: 31–2; 1921–2: 36. **157** 61. **159** 1921–2: 99–113. **163** *31* 49–50. **165** 1921–2: 116–7, 127. **166** Bull. 67 (v. 13, no. 6): 9–10. **167** 1921–2: 60–1. **170** 1909: 47; 1922: 48–9, 52–5. **176** *10* 165–6, 225–6. **209** 887–8. **211** 136–45. **222.** **229** 71–3. **236** 6–10. **239** Nov. 5, 1922, Feature section. **244** 836–9.

## 37. Limitation of numbers.

**6** 79–82, 91, 96–100. **22** 233–9. **27** 183. **33** 329–40. **36** 57–60, 177. **61** 104–5, 122–4. **66** 126–7, 220–2. **71** *25* 602–6; *26* 132, 134. **73** *42* 79–84; *46* 534–7; *47* 183–7; *61* 284–5. **74** *32* 319–27; *50* 793–4. **76** *142* 729–31. **78** *106* 11–3; *114* 708. **79** *32* 137–8. **81** *78* 275. **82** *5* 143–4, 391–401, 421–30; *9* 261, 529; *11* 112; *12* 456; *13* 139, 241–51, 357, 391–6, 471, 523, 597, 654–7, 707; *14* 4–5, 46, 150–1, 235–40, 361–2, 365–6, 391–2, 440, 573–4; *15* 35–9, 41, 208–11, 345, 635. **83** *20* 337–8. **84** *26* 56; *39* 744; *51* 82; *42* 375. **89** *2* Nov. 28–31; *7* Oct. 38–9; *8* March 36–9. **91** *8* 142–62. **95** *12* 196; *20* 9–14, 19. **96** *45* 390, 725–6. **97** 1912 *1* 111–2. **104** 11, 59–79. **105** *9* 1–5; *11* 153; *13* 16–7; *21* 102. **106** *21* 301–2. **108** 1904–5: 4–5; 1907–8: 37–8; 1908–9: 62; 1909–10: 31; 1915–6: 63–5; 1921–2: 7–8. **110** *1* 18–9; *6* 124–6. **112** 1902: 24, 35–6; 1908: 31; 1912: 13, 47; 1913: 10; 1917: 12–5. **113** *8* 356. **114** 21–6. **120** *16* 31–4. **121** ll. 10–11. **125** 69–70. **129** *13* 15–6; *19* 54–5, 258–9. **131** 75–6 132–47, 191–2. **133** 1914–5: 42–3. **136** *34* 84. **139** 1903–4: 11; 1905–6: 8; 1908–9: 10–1; 1921–2: 45–6. **141** 1921–2: 3–5. **142** 123–4. **143** 154, 188. **145** 1922: 2. **155** 1921–2: 12–4. **160** 1922: 11–2. **166** Bull. 69 (v. 14, no. 5): 6; Bull. 72 (v. 16, no. 2): 10–1; Bull. 73 (v. 16, no. 5): 5. **168** 1920: 8. **200** May 29: 4. **209** 888. **236** 7. **239** Oct. 8, 1922 Reprinted sheet; Nov. 5, 1922 Feature section.

## 38. Limitation of the size of sections.

**1** 130. **7** 258–69. **27** 183. **35** 183. **38** 161. **66** 284. **73** *23* 112; *40* 222; *41* 418–20; *51* 152; *55* 67–8. **78** *89* 370. **81** *74* 592–3. **82** *2* 153; *5* 127; **6**

727–8; *9* 510; *13* 357, 513–4; *15* 35–9. **83** *14* 705. **88** *10* 91. **89** *8* March 38–9. **92** *23* 66, 68–9. **95** *7* 41; *12* 193. **96** *55* 312; *58* 233. **98** 1915, no. 6: 6–7, 19–20; 1916, no. 19: 120, 124–5; 1917, no. 19: 99, 105. **101** 1914: 40. **105** *5* 69; *20* 2. **108** 1915–6: 63. **110** *3* 80–1. **112** 1903: 38–9; 1912: 13. **119** 1908–9: 39. **120** *11* 408–9; *13* 401–2, 453–4; *16* 31–4. **121** Il. 480–90. **131** 132–47. **139** 1906: 8. **142** 119–20, 188. **166** Bull. 68 (v. 14, no. 22): 4.

39. Election of courses under the guidance of competent faculty advisers.

**1** 113–4. **2** 118, 266–70. **5** 52–4. **6** 82–90. **7** 266. **12** 56–7. **14** 34–8. **18** 42–60, 134–46. **27** 134, 148. **28** 99–102, 173–4. **31** 75–6. **32** 118–56, 222. **33** 37–64, 65–109. **35** 45, 48–50, 138–44, 187. **36** 27–9, 83–7, 128. **43** 97–8, 106–7, 179. **47** 270–8. **54** 68–71. **57** 38–40. **58** 117. **61** 11–7, 31–2, 85–92, 130–2. **63** 99, 269. **64** 312–20, 436–41. **66** 194–6, 285. **67** 72–4, 85–8, 113–7. **68** *1* 190–1. **69** *91* 752; *101* 487. **71** *30* 442–7, 646–7. **73** *32* 141–7, 153–5; *39* 228, 246; *40* 225; *41* 370–81; *49* 52; *50* 19–22; *52* 464–70. **74** *50* 802. **78** *77* 47–8; *84* 426–7; *93* 416–7; *96* 414. **79** Suppl. Oct. 25, 1922: 8–9. **80** *191* 441–8; *213* 651–5. **82** *4* 432; *5* 200–1, 396; *8* 146–7; *10* 770; *14* 366–7, 443–7. **83** *9* 89–90, 98–9, 119; *11* 690; *14* 399, 719; *18* 513–29; *30* 88. **84** *30* 846–7; *38* 732, 915. **92** *5* 26; *11* 81; *13* 46; *16* 71–2; *23* 69–70. **95** *2* 97–8; *12* 274–5; *20* 21, 37–43. **96** *42* 58, 335–6; *44* 495–500; *46* 684; *47* 525–8; *54* 318–21; *60* 782. **97** 1903 *1* 306; 1908 *1* 103–4; 1912 *1* 33. **98** 1917, no. 15: 79, 114; 1917, no. 16: 235–8. **100** 1921–2: 100. **101** 1914: 18. **105** *13* 235; *20* 1–2. **108** 1912–3: 44; 1915–6: 62. **110** *6* 126, 147; *9* 247–8. **112** 1901: 29; 1902: 22; 1908: 27; 1910: 41; 1912: 29; 1913: 25. **113** *8* 351–4; *10* 342–3. **118** 1901–2: 432; 1921–2: 177. **119** 1908–9: 41–2, 44, 49; 1909–10: 6, 75–6; 1910–1: 9, 72–3; 1913–4: 73–4; 1914–5: 8, 10; 1915–6: 8–9; 1920–1: 108–9. **120** *11* 387; *18* 246–8, 393–400; *19* 270–1; *24* 68–71. **126** *90* 112. **129** *3* 80–2, 86–9; *7* 80, 82–4; *9* 79–80; *17* 11–26. **133** 1918–9: 97; 1921–2: 101. **134** 1920–1: 19; 1922–3: 22. **139** 1920–1: 17; 1921–2: 13–4, 33–4. **140** 1911–2: 110; 1913–4: 86–7; 1914–5: 87; 1921–2: 87–8. **142** 115, 169. **145** 1917: 44–5; 1919: 54, 68–9. **150** *20* 205–6. **158** 21 ff. **165** 1921–2: 116–8. **170** 1920: 50. **176** *18* 414, 558. **200** Apr. 29: 5; May 12: 4; May 18: 4; May 31: 4. **231.** **255** 383–91.

40. Election of courses for long periods in advance—as for a year rather than for a semester (or term or quarter).

**1** 130. **27** 158. **28** 99–102. **36** 158, 160–6, 169. **47** 358–9. **51** 326. **58** 111–6, 119–23. **61** 11–7, 31–2, 85–92, 130–2. **64** 312–20, 436–41. **66** 194–6, 285. **67** 72–4, 85–8, 113–7. **68** *1* 190–1. **71** *30* 442–7, 646–7. **73** *32* 141–7, 153–5; *38* 226–43; *41* 370–81; *52* 464–70. **78** *84* 426–7. **80** *213* 651–5. **83** *9* 98–9. **84** *30* 846–7. **92** *5* 26–7. **96** *42* 335–6; *45* 204; *49* 131. **98** 1917, no. 16: 235–8. **101** 1914: 34 ff., 40; 1918: 37. **108** 1921–2: 27–8. **110** *6* 147. **112** 1908: 53. **118** 1901–2: 429–30. **119** 1909–10: 6, 75–6; 1904–5: 121; 1908–9: 9, 11–3; 1913–4: 74. **120** *18* 393–400; *24* 68–71. **129** *3* 80–2, 86–9; *7* 80–2, 83–4; *17* 11–26. **136** *34* 107. **139** 1921: 32. **145** 1919: 54–6. **158** 21 ff. **165** 1921–2: 127. **170** 1920: 50. **231.**

41. System of concentration and distribution of courses.

**4** 73–4, 84–6. **5** 53–4. **15** 303–15. **20** 20. **28** 99–102, 165–8. **31** 70–9. **34** 75–98. **36** 83–7, 157–8, 162–7. **39** 189–90, 217. **40** 92. **42** 155–67. **43** 56, 101–2, 105–6. **48** 29, 40–1. **57** 14–7, 74–5. **61** 11–7, 31–2, 85–92, 130–2. **64** 312–20, 436–41. **66** 114–5. **67** 72–4, 85–8, 113–7. **69** *107* 743. **70** *98* 659–61, 664–6. **71** *22* 617–25. **73** *22* 16–7; *23* 1–17; *29* 140–9, 325–35; *32* 141–7, 153–5; *38* 226–43; *41* 67–9, 370–81; *42* 367–75; *45* 429–30; *51* 322; *52* 81–7, 212; *53* 137–45, 248–64; *54* 178–9. **77** *8* 183. **78** *77* 47–8; *84* 426–7; *90* 184–5. **79** Suppl. Oct. 25, 1922: 7–9, 11, 14–5. **80** *191* 437–40; *213* 651–5. **82** *3* 459–60; *8* 57–60, 402–6; *12* 228; *13* 258; *14* 16, 368, 387–92. **83** *11* 541, 692–3; *18* 369–80; *26* 611–2. **84** *30* 846–7; *31* 21; *33* 947; *36* 22; *38* 148; *39* 662–3, 666; *40* 316; *41* 930. **85** *65* 189–90. **92** *11* 18–21; *13* 41–2. **95** *5* 75–86; *6* 72–93; *20* 30. **96** *52* 224. **97** 1902 *1* 661. **98** 1917, no. 16: 235–8; 1919, no. 88: 7. **101** 1914: 18, 20–1. **105** *4* 185–8; *5* 31; *8* 179–80; *11* 172. **106** *8* 90; *13* 140; *18* 486. **108** 1915–6: 62; 1919–20: 66. **109** *1* 57–9, 102. **110** *3* 176–81; *4* 197–8; *6* 150. **112** 1901: 29–30; 1907: 23; 1908: 15; 1913: 15–6, 30. **113** *7* 274–5. **119** 1908–9: 9–12, 39–41, 44, 49; 1909–10: 6, 75–6; 1910–1: 8–12; 1912–3: 8, 68–9; 1913–4: 73–4; 1914–5: 7–10, 77; 1918–9: 12–3; 1919–20: 13. **120** *18* 393–400; *24* 68–71. **126** *82* 39–47, 49–53; *90* 25–6. **129** 1906: 80–2, 86–9; 1910: 80–2, 83–4; 1912: 77–8; 1916: 33–5; 1920: 11–26, 157–8. **130** *10* 263–4. **139** 1919–20: 36–7; 1921: 32. **141** 1912–3: 70–1; 1913–4: 15; 1914–5: 60–1; 1921–2: 21. **142** 168, 190. **144** *175* 43–52. **145** 1904: 6–14, 18–25; 1919: 28–34. **150** *5* 62–4, 94–5, 215–20. **151** 16–21. **165** 1921–2: 117–8. **166** Bull. 67 (v. 13, no. 6): 22–5. **167** 1921–2: 58–9, 64–6. **211** 146–7. **231.**

42. Reporting grades to students with sufficient, but not excessive, frequency and minuteness.

**5** 160. **8** ch. XXI. **27** 118. **28** 111–3. **31** 115–20. **47** 296. **51** 357–68. **66** 102–5, 108–9, 127–8. **72** *1* 50–4. **77** *2* 383–93; *8* 250. **79** *27* 98–9. **82** *1* 215; *5* 138. **84** *38* 915; *41* 64, 135. **88** *3* 36; *4* 31–4; *7* 73–5; *8* 29. **90** *1* no. 1: 82. **95** *20* 19. **96** *40* 245; *48* 551. **110** *3* 69–70. **112** 1904: 32; 1910: 42. **114** xlii. **119** 1913–4: 74. **127** 1916–7: 45. **129** *17* 48–9. **157** 30. **165** 1921–2: 128. **167** 1921–2: 104. **169** Dec. 43–4. **190** 27–32. **200** May 31: 4. **203** 213–21. **232** 207–19. **233** 195–201. **243.**

43. Publication of rank list.

**28** 114. **35** 188–9. **36** 166. **61** 19–20. **73** *39* 250; *51* 153. **77** *4* 298–9. **79** *27* 98–9. **82** *1* 215; *5* 41, 525; *11* 577; *13* 165; *14* 250, 440. **88** *4* 32; *11* 117–21. **96** *40* 245. **97** 1904 *2* 2422. **105** *8* 143. **118** 1901–2: 324, 442; 1921–2: 184. **119** 1908–9: 36; 1913–4: 11; 1920–1: 46–7. **126** *69* 122–4, 126–7; *82* 183–4. **130** *17* 35–41; *24* 216. **140** 1921–2: 190. **141** 1912–3: 14. **156** 1921–2: 38. **163** 1922: 371–2. **166** Bull. 67 (v. 13, no. 6): 5; Bull. 70 (v. 15, no. 2): 14; Bull. 71 (v. 15, no. 4): 26. **200** May 31: 4.

[44. General examinations in addition to, or in partial substitution for, course examinations.]

[45. Elimination of non-intellectual subjects from the undergraduate curriculum.]

46. Allowance for credit in proportion to grade of work.

**2** 318–9. **33** 233–49. **47** 290–5. **72** *8* 290–1. **73** *37* 298–305, 516–9; *38* 90–2; *40* 226–7; *53* 49–50, 53–4. **78** *88* 300–1. **81** *66* 375–8; *83* 579–80. **82** *9* 60–1; *13* 164; *14* 440. **83** *9* 118; *18* 380; *23* 450–4, 708–14. **84** *33* 665; *39* 750. **86** *3* 248. **88** *7* 37, 39–41; *8* 50, 52–3; *9* 36; *10* 112–3, 197; *11* 104. **89** *7* Nov.-Dec. 18–20. **92** *16* 73. **95** *3* 131–40. **96** *42* 336, 506, 839, 846; *44* 299; *49* 669. **97** 1905 *1* 540; 1914 *1* 160. **108** 1904–5: 7; 1907–8: 13–4; 1909–10: 31; 1921–2: 24. **110** *1* 20–1; *3* 136; *6* 151. **113** *5* 308; *7* 277–8. **119** 1905–6: 24; 1906–7: 27–8, 106–7. **121** Il. 878–97. **125** 53, 108. **133** 1921–2: 103–4. **134** 1922–3: 21. **141** 1921–2: 3–5. **156** 1920–1: 31–2. **170** 1920: 45–6. **255** 155.

47. Allowance of election of less or greater number of courses in proportion to grade of work.

**47** 290–5. **51** 354–6. **57** 50–3, 91. **65** 268. **73** *44* 25–34. **82** *9* 60–1. **83** *9* 86. **88** *11* 104. **95** *14* 125–34. **96** *42* 508–9. **97** 1905 *1* 540. **105** *5* 31; *15* 172. **108** 1907–8: 84. **110** *3* 136. **118** 1901–2: 432–3; 1921–2: 182. **119** 1906–7: 27–8, 106–7; 1912–13: 9–11. **126** *90* 27. **141** 1921–2: 3–5. **142** 168. **144** *175* 52–3. **145** 1919: 37–9. **149**. **170** 1920: 45. **209** 886–8.

[48. Provision of special sections for ablest men.[1]]

[49. Provision of special courses for ablest men.]

50. Honors and other forms of special treatment for ablest men.

**2** 113. **4** 73, 205–13. **5** 82–4, 183. **21** 32, 46. **27** 149. **28** 115–8. **31** 113–4. **35** 196. **38** 161. **39** 222. **47** 245–7, 290–5. **49** 14. **61** 92–6, 121, 506–8. **66** 130–2. **69** *103* 822–31. **71** *39* 542–52. **73** *24* 268–9; *29* 149–50, 334–6; *32* 71–4; *38* 170–2; **39** 261, 268; *42* 83; *45* 107–8, 430; *47* 80–6; 299–305; *55* 65–70; *64* 433, 436. **76** *131* 423–8. **77** *9* 351. **78** *97* 406, 479. **79** *21* 378–9; Suppl. Oct. 25, 1922: 11. **80** *213* 751–2. **81** *66* 378. **82** *2* 762–5; *5* 525, 671–2, 742–3; *8* 112–4; *9* 110, 536; *10* 363; *13* 54–5, 62, 165, 432–4, 577; *14* 391, 440, 547–8; *15* 647–8. **83** *12* 795; *18* 380. **84** *30* 711–2; *40* 689; *41* 135, 932; *46* 148–50. **88** *7* 40; *8* 28–9; *9* 57–8, 103. **89** *8* Oct. 42–3, 45–6. **92** *16* 69; *19* 66. **95** *20* 30. **96** *60* 750–2. **97** 1902 *1* 957; 1905 *1* 540; 1910 *1* 81–2, 162. **98** 1917 no. 15: 113–4; no. 16: 234–5. **100** 1921–2: 107–9. **103** 140–1. **105** *4* 62; *6* 3; *8* 143; *10* 76–7; *13* 38–9; *15* 120, 209–10; *17* 207; *20* 1–2. **106** *6* 42, 48, 50; *19* 96; *23* 382. **107** 1901–2: 71–2, 76, 79, 87, 194, 207, 258, 265, 270, 282, 308; 1920–1: 77–84, 109; 1921–2: 124–5. **108** 1921–2: 25–6. **109** *1* 100–1. **110** *3* 135–6. **112** 1910: 34–6; 1916: 21–3, 32–5. **113** *3* 43; *10* 210; *15* 393–4. **114** 25. **118** 1901–2: 324, 443–50, 460–502; 1921–2: 188–90, 201–31, 244–6, 252–4. **119** 1902–3: 10–11, 92; 1903–4: 95–7; 1904–5: 121–2; 1907–8: 6–8, 94; 1908–9: 16, 35, 42; 1910–11: 14–5, 73; 1912–3: 10, 78; 1913–4: 11, 66–7, 75;

[1] The Committee's report on this subject was published in the BULLETIN of the Association for October, 1923. Reprints may be obtained, without charge, from the National Research Council, Washington, D. C.

1914–5: 10, 75; 1919–20: 12–3, 43. **120** *13* 626–7, 647–55; *16* 445. **121** Il. 898–962. **122** 1921–2: 90–4. **126** *69* 97, 115–9; *82* 176–80; *90* 26, 104–6, 115–18. **129** *19* 56–7. **131** 293–6. **133** 1921–2: 103–5. **135** 81. **139** 1915–6: 11. **140** 1911–2: 175; 1913–4: 150–4; 1914–5: 157–78, 160–2; 1919–20: 161 ff.; 1920–1: 170 ff.; 1921–2: 190–1. **141** 1913–4: 69–70, 90–1; 1921–2: 3–5. **142** 171–2. **144** *175* 55, 128, 175–208. **145** 1919: 39. **150** *5* 171–2. **154** 132–3. **155** 1921–2: 10–1. **163** *31* 51–2, 54–5, 57. **165** 1921–2: 167–70. **166** Bull. 67 (v. 13, no. 6): 5; Bull. 70 (v. 15, no. 2): 14; Bull. 71 (v. 15, no. 4): 26. **167** 1921–2: 115–16. **168** 1913: 7; 1921–2: 18–9. **170** 1922: 29–30, 35–8. **171** 1917: 13; 1918: 43; 1919: 35; 1920: 15–6. **175** 1915–6: 135. **200** May 19: 4. **231**. **239** Nov. 12, 1922. Reprinted sheet.

C. Controlling the general conditions of undergraduate life in such a way as most to favor the stimulation of the intellectual life of the undergraduate.

**20** 65–78. **35** 174 ff. **47** 357–8. **48** 58–60. **63** 85. **71** *31* 444–8. **73** *22* 325–34; *26* 352–61; *28* 474–7; *29* 80; *45* 517–23. **82** *13* 165, 473–94, 666–7. **84** *17* 526–8; *33* 210. **89** *8* May 14–5. **96** *43* 544; *48* 557–62. **98** 1921, no. 8: 136–7. **108** 1919–20: 103. **208** 365. **217** 376–81.

(CI. C, as applied to collegiate influences.)

(CIa. CI, as applied specifically to official influences.)

[51. Stimulation of a habit of general reading.]

52. Use of libraries and museums for instructional and exhibitional purposes.

**51** 445. **68** *1* 280–92. **73** *43* 387–409; *47* 120–6; *48* 431; *49* 329; *62* 382–91; *63* 264–7. **78** *84* 432. **82** *1* 59; *2* 121–4, 788–9; *10* 140–1, 311–3; *15* 597–9. **83** *13* 809; *14* 225, 715. **84** *18* 174–5; *36* 660; *56* 214–5. **92** *15* 31. **96** *41* 765; *43* 158, 852; *44* 80; *48* 1005. **97** 1901 *1* 663–72; 1913 *1* 294–5, 301–2; 1914 *1* 477–8, 507–8; 1916 *1* 402. **98** 1914, no. 34: 3–4, 6–23. **101** 1914: 67. **103** 111. **104** 46. **107** 1901–2: 153. **108** 1915–6: 117; 1916–7: 101; 1917–9: 169. **109** *1* 270–1. **110** *2* 239–40. **112** 1901: 11, 63; 1903: 16, 36, 41–2; 1905: 4, 23; 1908: 55; 1909: 3–4; 1910: 63; 1911: 48; 1912: 45; 1913: 42; 1916: 24–8. **113** *6* 245–6; *13* 242–4. **119** 1903–4: 29, 210; 1908–9: 203–4. **121** Il. 541–54. **126** *69* 106; *82* 164–7; *90* 110–1. **127** 1920–1: 68. **129** *19* 255–6. **142** 175. **160** 1922: 10, 43–4. **165** 1921–2: 143, 149–53. **170** 1922: 24–5. **200** April 28: 4.

53. Provision of public lectures, concerts, etc.

**2** 194–5. **17** 12. **48** 44–5. **51** 444–5. **68** *1* 280–92. **73** *39* 233; *49* 52. **82** *1* 529; *9* 536–7. **83** *13* 809; *14* 225. **97** 1913 *1* 293. **105** *6* 124. **106** *4* 294–7; *21* 299–300. **107** 1920–1: 475. **112** 1901: 8, 9, 52; 1904: 6; 1908: 17–8, 55; 1913: 47, 48. **113** *9* 504–5. **118** 1901–2: 414. **119** 1907–8: 30; 1913–4: 63. **122** 1921–2: 69, 465–77. **126** *69* 101; *82* 156; *90* 120–1. **127** 1916–7: 5. **130** *4* 77–8, 219; *7* 157. **133** 1917–8: 22; 1918–9: 46; 1920–1: 229–30; 1921–2: 260–1. **140** 1911–2: 84; 1913–4: 62–3; 1914–5: 62–4; 1918–9: 56–7; 1919–20:

60–1; 1920–1: 59–60; 1921–2: 59–62. **142** 175, 189. **159** 1921–2: 95. **168** 1921–2: 19. **170** 1902: 42–5; 1903: 43–4. **176** *10* 156.

54. Issuance of official publications of interesting and intellectual character.

**27** 129. **51** 287. **68** *1* 280–92. **73** *49* 79. **82** *1* 934–6; *13* 161. **83** *14* 225. **99** no. 13. **108** 1914–5: 125; 1917–9: 225; 1919–20: 50. **112** 1908: 17–8. **122** 1921–2: 65–6. **133** 1918–9: 45–6. **140** 1913–4: 61–2; 1914–5: 61–2; 1918–9: 55, 56; 1919–20: 59–60; 1920–1: 58. **142** 175. **163** 1922: 58–9.

(CIb. CI, as applied specifically to personal influence of instructors.)

[55. Development of faculty-student clubs or discussion groups.]

56. Encouragement of individual social relations.

**8** 95, 360. **9** 1–3. **10** 23, 30, 50–1. **15** 159. **17** 99–101. **19** 52, 160. **25** 19–21. **27** 213. **35** 367–73. **40** 351, ch. XXI. **41** 291. **46** 39–40, 87–98. **47** 316–9, 347. **49** 34, 244. **52** 238–9. **61** 51. **65** 271–2. **68** *2* 369–70. **69** *107* 746. **70** *83* 519. **71** *30* 621–3, 636–8. **73** *32* 133–9; *39* 237; *46* 157–67; *48* 514–9; *50* 240–1; *64* 1–6. **74** *50* 446. **76** Sept. 1921. Remarks on R. W. Brown's article under heading "Personal and otherwise." **82** *3* 131; *4* 294; *9* 311–2; *13* 162; *16* 65–70. **83** *9* 350, 357; *13* 383, 388; *15* 544; *19* 473. **84** *20* 198–9; *24* 505; *37* 932. **85** *60* 80. **88** *4* 25–7; *8* 91–3. **92** *13* 39, 43; *23* 69–70. **95** *3* 87–92, 110–22; *8* 212–5; *17* 71–2; *20* 30, 37–43. **96** *43* 137; *45* 729, 731; *47* 535–7; *48* 549; *50* 789; *60* 749. **97** 1905 *1* 539; 1907 *1* 172; 1908 *1* 103–4; 1909 *1* 17–9; 1911 *1* 58–63, 578–9. **98** 1911, no. 7: 20–1; 1915, no. 27: 47–8; 1917, no. 15: 104. **105** *1* 54; *5* 49–50, 68–9; *6* 3, 146–7, 168–9; *9* 4; *10* 77, 144–5, 147; *12* 9–10, 186; *13* 121, 235. **106** *4* 300–2; *6* 11, 15–6, 48–9; *9* 242–3; *21* 205–6; *23* 366–8, 382–3; *24* 209. **108** 1904–5: 8. **110** *1* 109–10; *2* 107; *8* 256. **112** 1901: 7; 1902: 28–9; 1905: 2; 1906: 5–6; 1907: 19, 21; 1908: 3–4, 27–8; 1909: 36; 1910: 41–2, 52; 1912: 29. **113** *6* 168; *8* 264. **119** 1904–5: 19; 1915–6: 8–9. **120** *12* 179; *29* 209–11. **121** ll. 963–1015. **130** *15* 18. **137** 1913–4: 29–30. **140** 1911–2: 91; 1913–4: 69; 1914–5: 69. **142** 149, 153, 178. **206** 723–4. **209** *71* 888, 891. **211** 123, 147, 155. **236** 14, 16, 18–9. **239** Nov. 5, 1922, Feature section. **255** 312–7.

CIc. CI, as applied specifically to the mutual influences of undergraduates.

**19** 253. **20** 33–4. **25** 18–9. **39** 169–70, 214–7. **51** 414, 461. **52** 239. **81** *67* 652; *82* 81–4. **88** *11* 131–7. **96** *56* 402–4. **97** 1905 *1* 9; 1909 *1* 19, 93; 1911 *1* 58–65. **105** *9* 217–8; *10* 66, 127–8, 141–2, 144; *11* 88; *13* 119–22. **119** 1911–12: 15–6; 1913–14: 8–10, 67–8, 74; 1914–15: 6–7, 68–9, 85–6; 1915–16: 8–9, 76–7; 1919–20: 11. **142** 152–3, 175–6. **176** *10* 140. **209** 888–9, 891. **211** 147.

[57. Elimination of hopelessly non-intellectual undergraduates.]

58. Maintenance of moral vigor.

**5** 64. **7** 24–5, 89–91, 100–1, 128–9, 147–58, 160–6, 169–71, 179–85, 194–5, 204–6 245–9, 254–7, 271, 285, 294–6, 308–9, 334–7. **8** 92–5. **10** 17–8, 22–3, 26, 39, 40. **14** 65–90. **19** 355. **21** 4, 152–4. **23** 402–18. **25** 18–9. **26** 5–9. **35** 381–91. **40** 75–6. **43** 112–7. **44.** **46** 67–9, 120, 163–5, 225–39. **47** 114–29, 181–94. **48** 46–7. **49** 321–8. **50** 127–34. **51** 477–96. **57** 6, 10. **59** 271–87. **61** 145. **65** 270–1. **68** *1* 192–3, 203–6; *2* 207–14. **69** *88* 483–9. **71** *23* 91–7; *25* 55–6; *27* 317–24; *30* 620, 629; *33* 71–8, 289–317; *39* 335–8; *43* 48. **73** *28* 469–71; *37* 492–500; *38* 292–8, 520–1; *39* 500–10; *43* 292–309; *45* 108; *46* 1–9, 157–67, 361–8; *47* 406–10; *48* 91–4; *49* 434, 448; *50* 225–45; *52* 471–7; *59* 325–31; *61* 191–4. **76** *123* 134. **77** *1* 263–71. **78** *89* 44, 117. **81** *68* 176–85; *77* 170–7; *82* 81. **82** *2* 469; *13* 158–66, 241–51, 541–7. **83** *9* 83, 349; *10* 745; *12* 788; *15* 544, 548. **84** *29* 372–6, 481–4, 527–32; *38* 733, 917; *39* 722; *42* 330. **85** *71* 573–5. **95** *3* 15–9, 93–7, 99–110, 147–61; *5* 22–5; *8* 88–92, 216–21; *10* 256–9; *13* 47; *14* 90–110, 149–53; *17* 59–67; *20* 19. **96** *40* 627; *42* 348–9, 517, 526, 535; *43* 79, 552; *44* 487, 779; *45* 731; *47* 535–7; *53* 611; *60* 757–8, 779. **97** 1901 *2* 1290–2; 1902 *1* 184, 631–2; 1909 *1* 194; 1910 *1* 492. **98** 1915, no. 8: 9–23, 27–30; 1917, no. 16: 245. **102** Aug. 1922: 263–4. **104** 26. **105** *15* 217; *17* 126–8. **108** 1912–3: 67–9; 1919–20: 31–5. **110** *6* 126. **112** 1901: 64; 1904: 38; 1905: 2; 1906: 2–3; 1910: 65; 1911: 40–5; 1912: 29; 1914: 35; 1917: 38–41; 1918: 37–41. **119** 1905–6: 46–7; 1912–3: 11–2; 1913–4: 8; 1917–8: 20–1; 1918–9: 13–4; 1919–20: 17–8. **120** *16* 443–4. **122** 1921–2: 70. **125** 53–6, 108. **126** *69* 17, 100–1, 109; *82* 154–5; *90* 104, 118, 121–2. **127** 1915–6: 4; 1920–1: 4. **129** 1912: 6–7; 1913: 67–8; 1921: 51–2. **136** *34* 83. **139** 1909: 10–1; 1912: 6. **140** 1921–2: 202. **142** 127–8, 156–7, 193. **155** 1921–2: 21–2. **166** Bull. 67 (v. 13, no. 6): 32–5; Bull. 71 (v. 15, no. 4): 3–4; Bull. 72 (v. 16, no. 2): 5–6. **170** 1922: 38–9. **176** *10* 320. **188** 123, 132. **204** 240. **210** 936–7. **211** 126–7. **237** passim.

## 59. Maintenance of physical vigor.

**2** 201–6. **5** 69. **7** 141–6, 245. **8** 310, 356. **26** 2–3, 49–54. **27** 22. **31** 133–40. **35** 248. **46** 73–5, 225–39. **47** 259–60. **48** 42–4. **49** xvi, 183–206. **57** 8. **63** 27. **65** 61–2, 123–4. **68** *1* 203–6. **70** *84* 67–9. **71** *24* 38–42, 356–7, 457–9; *26* 224–6; *28* 159; *29* 35–41, 314; *30* 93–4; *39* 1–10. **73** *26* 17; *35* 174; *36* 132–8; *37* 27–8; *46* 157–67; *49* 428; *59* 213–8, 325–31; *62* 46–54; *63* 198–210. **78** *99* 648–9. **81** *61* 551–2; *77* 170–7. **82** *1* 733–8; *4* 343–51, 439–44, 954, 997–1000; *5* 533; *7* 427–32, 541–5; *8* 511–7, 549–57, 576–82; *9* 597–8; *10* 273–4; *11* 604; *13* 119, 128–35, 165, 620–1; *14* 333–5; *15* 643–6. **83** *10* 746, 752–3; *11* 819–26; *16* 42–55; *22* 415; *30* 89. **84** *29* 372–6; *35* 608; *38* 761; *39* 708–11; *41* 27. **89** *7* Oct. 40–1. **92** *20* 59. **95** *3* 19–22; *12* 275–6. **96** *40* 627; *42* 517; *43* 552; *47* 524–5; *50* 1147; *52* 701–2; *54* 691; *59* 107. **97** 1902 *1* 183, 482–3, 957; 1903 *1* 723, 733–4. **98** 1915, no. 27: 44; 1916, no. 19: 116–7; 1917, no. 16: 242, 245; 1917, no. 19: 163. **100** 1921–2: 101–2. **103** 116, 211. **105** *11* 67; *13* 121; *15* 209–10. **107** 1920–1: 74; 1921–2: 300–1. **108** 1915–6: 131, 138; 1917–19: 189; 1919–20: 70, 73–4, 76. **109** *1* 100. **110** *1* 345–6. **112** 1901: 24–5, 30; 1906: 33–4; 1908: 47–8; 1909: 7; 1910: 51, 62; 1911: 48; 1912: 29, 45; 1913: 25; 1915: 17. **113** *14* 51–2; *15* 68. **119** 1907–8: 19, 21, 119; 1909–10: 86; 1910–11: 84; 1913–4: 12, 67; 1914–5: 294; 1915–6:

9, 71; 1917–8: 20–1; 1918–9: 13, 240–1; 1919–20: 9, 277, 287–8; 1920–1: 310–2. **120** *29:* 202–9. **122** 1921–2: 71–2. **126** *69* 18–9; *82* 126–7; *90* 52–4. **128** *31* 105–6. **130** *3* 169–71, 174–5; *7* 154–5; *9* 9–10; *10* 268–9; *12* 285–6, 289; *16* 30–2; *17* 68, 450–1. **136** *34* 60. **137** 1919–20: 37–8. **139** 1909: 11; 1912: 6; 1919–20: 31–5; 1921: 40. **140** 1921–2: 90, 201. **142** 124–5, 177, 192. **144** *175* 141–50. **145** 1922: 64–5. **154** 137–8. **155** 1921–2: 24–7. **156** 1909–10: 113; 1920–1: 127. **164** 26–7. **165** 1921–2: 136–7. **166** Bull. 67 (v. 13, no. 6): 32–5. **168** 1916: 8–9; 1920: 17. **169** July 84–5. **170** 1922: 40. **200** May 26: 6–7. **248** 19–23.

## 60. Control of undergraduate publications.

**31** 145. **35** 178–80. **36** 11–23. **43** 62–3, 91. **46** 225–39. **57** 12. **58** 165–7. **68** *1* 203–6. **69** *129* 142–3. **78** *89* 114–5. **80** *190* 170–7. **82** *1* 850; *2* 313–5; *3* 231–4; *13* 82; *15* 351–2. **83** *12* 789; *28* 84–5. **84** *29* 372–6. **96** *47* 524–5. **98** 1917, no. 16: 245. **102** Aug. 1922: 251–2. **104** 20, 25–6, 80–2. **105** *5* 32. **106** *20* 74. **107** 1901–2: 153. **108** 1917–9: 180. **112** 1901: 38; 1909: 29–30. **121** ll. 747–84. **127** 1920–1: 6. **130** *11* 165–6. **133** 1919–20: 194–5. **140** 1913–4: 61–2; 1914–5: 61–2. **145** 1922: 45–7. **156** 1920–1: 27. **165** 1921–2: 134–6. **200** Apr. 24: 4; May 19: 4; Aug. 19: 8 ff.

## 61. Control of undergraduate athletics.

**8** 151, 326–7, 356. **10** 21, 30, 32, 67–8, 70. **15** 240–2. **18** 96–117. **21** 155 ff. **31** 179–86. **33** 317–20. **35** 180, 247–77, 289. **36** 11–23, 63–5, 175–7. **39** 217, 224–5. **40** ch. XII. **43** 62–3, 91. **46** 119, 225–39. **47** 157–80. **51** 446–7. **58** 156–65. **59** 230–55. **61** 69–70, 503–6. **62** 117–24, 130. **63** 76, 94–5. **64** 382–9. **67** 71–2. **68** *1* 203–6; *2* 277–84. **69** *90* 534–44; *107* 747; *108* 670–1; *116* 577–88; *129* 142–3; *130*, 663–71. **71** *35* 129–39, 293, 301–11. **73** *22* 467; *24* 398–406; *25* 61–6; *27* 42–52; *31* 451–69; *32* 378, 438–9; *42* 162–9; *48* 241–53; *50* 241–2; *58* 1–7; *62* 55–63; *63* 198–210. **74** *31* 287–97; *50* 799–801. **77** *5* 225–9. **78** *83* 368; *85* 511; *89* 114–5. **79** *17* 339–40; Suppl. Oct. 25, 1922: 7. **80** *185* 351–64; *190* 170–7; *204* 417–8. **81** *61* 551–2; *68* 84–7; *76* 71–5; *79* 75–7. **82** *1* 850, 929–30; *2* 213–5, 707; *3* 231–4; *4* 212–3, 953–4; *7* 479, 541–5; *8* 511–7; *9* 262, 570–4; *10* 311–3; *11* 566, 618; *12* 362; *13* 82, 158, 164, 655–6; *15* 351–2, 486, 681–6; *16* 7–11. **83** *11* 95–105, 309–14, 327–46, 348–9; *12* 789; *13* 512, 758–67, 770–7, 788; *16* 42–55; *19* 513–22; *28* 84–5. **84** *18* 166–7; *24* 21–3; *27* 547–53; *29* 372–6; *55* 523–8. **85** *46* 576–7; *65* 183, 190. **89** *7* Oct. 40–1; *8* Apr. 4–5, Oct. 62–4. **91** *8* 60–1. **95** *7* 48–50; *8* 215–6; *11* 324–53; *14* 167–76. **96** *42* 837–8, 842–3; *43* 549–50, 554, 563; *44* 293, 489; *47* 524–5, 545; *49* 689, 693; *53* 237; *55* 532–3; *60* 779–80. **97** 1902 *1* 659; 1907 *1* 354–7; 1909 *1* 18. **98** 1917, no. 15: 55, 104, 109; no. 16: 245. **101** 1918: 24. **102** May 1922: 171–5; Aug. 1922: 251–2, 262. **103** 116. **104** 20, 25–6, 80–2. **105** *1* 160–1; *8* 77–8; *9* 40, 49–53; *10* 76–7; *11* 67, 231–3; *13* 121. **106** *6* 50; *8* 90; *21* 114–8, 205. **107** 1901–2: 154–7; 1920–1: 288–9; 1921–2: 300–1. **108** 1911–2: 105; 1915–6: 132. **112** 1901: 6–7; 1904: 28–35; 1909: 30; 1915: 11–7. **113** *4* 36–7, 39–40; *5* 15–6, 316–9; *8* 259–61; *9* 195–8, 521–6; *14* 51–4; *18* 177–80. **119** 1907–8: 111, 114; 1910–1: 84; 1911–2: 14–5, 89–92; 1913–4: 80–3; 1914–5: 69–71, 92–3; 1915–6: 79–82; 1918–9: 13; 1919–20: 9, 44–6,

287–8; 1920–1: 12–4, 36–8, 46, 48–52; 1921–2: 461–2. **120** *11* 412–3; *15* 388; *26* 583–94. **121** Il. 747–84. **122** 1921–2: 71. **126** *90* 122. **127** 1921–2: 4, 59. **130** *11* 165–6; *12* 290–2, 295. **131** 38–9. **136** *34* 60–2. **137** 1921–2: 17. **139** 1902: 24–7; 1909: 11; 1912: 6; 1916: 15; 1920: 31–5. **140** 1913–4: 159; 1914–5: 167; 1920–1: 181–2, 184. **141** 1919: 6; 1920: 39. **142** 125, 191. **145** 1922: 45–7. **156** 1921–2: 30. **157** 32. **160** 1912–3: 8; 1915–6: 14; 1921–2: 10. **162** 258. **164** 11–4. **165** 1921–2: 134–48. **170** 1922: 41. **175** 23–4, 58–62. **176** *10* 180; *11* 45–6. **200** Apr. 24: 4; May 23: 4; May 25: 5; Aug. 19: 8 ff. **211** 128. **239** Nov. 5, 1922, Feature section.

## 62. Control of undergraduate social activities.

**2** 198–201. **5** 70. **6** 107. **8** 311–2, 356. **18** 118–33. **21** 89 ff., 106–8, 189 ff. **31** 141–8. **35** 180. **36** 11–23, 177–8. **40** 90–1. **43** 62–3, 91. **46** 225–39. **47** 137–48, 256–9. **49** 25. **51** 454–60. **58** 167. **61** 68–9, 102–4, 127–30. **62** 117–24, 130. **63** 263–4. **64** 375–80. **66** 123–4, 132–4. **67** 71–2. **68** *1* 156–8, 175–81, 203–6, 309; *2* 141–2, 277–84, 373–7. **69** *91* 752; *108* 667–8; *129* 142–3. **70** *83* 726–8. **71** *30* 642. **73** *21* 245–7; *28* 472–3; *39* 244; *42* 91–6; *46* 157–67. **74** *50* 794–9. **78** *84* 582; *87* 47; *89* 114–5. **79** Suppl. Oct. 25, 1922: 7. **80** *190* 170–7; *204* 417–8. **81** *68* 84–7; *79* 75–7. **82** *1* 850; *2* 313–5, 448–52, 663–4; *3* 231–4; *4* 453, 953–4; *9* 757–8; *10* 311–3, 368–70; *11* 566; *12* 362; *13* 82, 158–66, 246–7, 541–7, 656; *14* 440; *15* 351–2; *16* 687–8. **83** *12* 789; *13* 387–8; *28* 84–5. **84** *29* 372–6; *33* 981. **85** *46* 576–7; *65* 190. **91** *8* 60–1. **95** *2* 94–5; *4* 63–6; *5* 200–3; *7* 48; *8* 42–64, 221–45; *10* 243–56; *11* 224–30; *12* 197; *14* 165–7, 197–204; *17* 68–70. **96** *47* 524–5; *50* 786, 788, 1148; *60* 756–7, 781. **97** 1909 *1* 18, 20, 214–8; 1911 *1* 294–6. **98** 1917, no. 15: 55, 104, 109; no. 16: 245–7. **101** 1918: 24; 1920: 97–106. **102** Aug. 1922: 251–2. **104** 20, 25–6, 80–2. **105** *10* 147; *11* 89–91; *13* 122. **106** *21* 114–8, 205. **107** 1901–2: 153. **108** 1902–4: 34–6; 1909–10: 76–7; 1911–2: 11–2; 1913–4: 43–7, 69; 1914–5: 70; 1919–20: 75–6. **110** *6* 126, 170. **112** 1902: 60; 1904: 30, 33–4; 1913: 26–30. **119** 1907–8: 111, 114; 1912–3: 12–3; 1913–4: 8–10; 1917–8: 17; 1919–20: 11; 1920–1: 35–6. **120** *12* 523–8. **121** Il. 747–84. **127** 1916–7: 43–4; 1920–1: 59. **130** *11* 165–6; *12* 290–2, 295; *18* 452–3. **133** 1919–20: 195–6. **137** 1921–2: 17. **140** 1913–4: 159, 162–4; 1914–5: 167, 170–2. **144** *175* 39. **145** 1922: 45–7. **164** 25–6, 32–3. **165** 1921–2: 134–6. **168** 1914: 7–8; 1915: 6. **174** 9–10. **200** Apr. 24: 4; Aug. 19: 8 ff. **211** 128–9. **239** Nov. 5, 1922, Feature section.

## 63. Encouragement of intellectual organizations.

**5** 66, 68. **6** 114. **7** 208–9. **17** 12–3. **31** 141–8. **35** 352–65. **47** 133–7. **59** 201–15. **61** 228–9. **68** *1* 203–6. **70** *82* 937–42. **71** *35* 312–9; *39* 122. **73** *28* 472–3; *39* 233, 250; *42* 475–85; *46* 157–67. **80** *196* 367–72. **82** *3* 231–4; *10* 311–3; *14* 440; *16* 747–9. **83** *12* 249–50; *28* 84–5. **84** *36* 730. **85** *60* 81. **88** *7* 70–2. **92** *22* 79. **96** *60* 756, 779. **97** 1909 *1* 215–8; 1914 *1* 414. **98** 1917, no. 15: 55, 104, 109; no. 16: 245. **105** *2* 194; *11* 242. **106** *23* 370. **108** 1904–5: 107. **110** *5* 116–9. **112** 1909: 30; 1915: 23. **126** *69* 108–9. **130** *11* 165–6; *12* 290–2, 295. **142** 191. **156** 1920–1: 27. **166** Bull. 70 (v. 15, no. 2): 27–31. **168** 1920: 17. **176** *10* 129, 132, 148, 153, 160, 220, 248; *24* 641. **200** May 19: 4.

64. Enlistment of undergraduate councils and similar bodies in intellectual enterprises.

**2** 196–7. **5** 68. **35** 347–8. **47** 148–56. **59** 255–71. **68** *1* 203–6. **73** *39* 252–6; *46* 157–67. **82** *13* 82, 463–4, 502–3. **83** *28* 84–5. **95** *2* 82–92. **96** *60* 756, 785–6. **98** 1917, no. 15: 55, 104, 109; no. 16: 239–40, 245. **106** *9* 243–4, 246–7; *13* 434–6. **107** 1901–2: 71. **112** 1908: 21–3; 1915: 18. **119** 1913–4: 79; 1915–6: 9; 1918–9: 70; 1919–20: 43. **139** 1921: 25–7. **175** 170–1. **200** May 5: 4; May 12: 4.

(CId. CI, as applied specifically to the influence of graduate students on undergraduates.)

65. Association of graduates and undergraduates in courses.

**27** 139. **32** 163–73. **51** 283–6, 422. **66** 122, 127. **73** *31* 337–8. **89** *7* Oct. 19. **92** *7* 51–65. **98** 1917, no. 16: 219; 1921, no. 8: 124. **105** *9* 3. **255** 155.

66. Development of clubs or discussion groups including both graduates and undergraduates.

**8** 101–5. **47** 331. **73** *46* 157–67. **76** *126* 595. **83** *10* 293–4; *12* 792. **84** *18* 175–6; *41* 860. **92** *22* 79–80. **106** *9* 242–4. **107** 1901–2: 181–2. **112** 1901: 7–8. **139** 1904: 12. **166** Bull. 70 (v. 15, no. 2): 27–31.

(CIe. CI, as applied specifically to alumni influences.)

[67. Supplementing of interest in athletics.]

(CII. C, as applied to extracollegiate influences.)

**7** 278–80, 284. **8** 67, 74, 355. **10** 62–3, 65. **17** 27–47, 75–87, 91, 114–5. **21** 67 ff. **41** 309–10. **83** *9* 100. **95** *2* 101–6. **96** *42* 522; *50* 775; *52* 389. **97** 1908 *1* 104. **105** *10* 78. **142** 158, 183. **236** 14.

For the Committee,

ERNEST H. WILKINS, *Chairman.*

# RECENT EDUCATIONAL DISCUSSION

CULTURE AND PROFESSIONALISM IN EDUCATION.[1]—"The rapid growth of professional tendencies and aims in higher education appears then to be the effect of the social and economic changes of the last century and a half. No such political and industrial dislocation could possibly occur without a great educational change. The decline of the traditional leisure class has given a shock to the studies and intellectual interests associated with it. The economic and political elevation of the masses has intensified the studies and interests which have been in the past the preoccupation of the masses while it has also afforded facilities for realizing their practical ambitions.

"Even if it could be proved that the present movement toward professionalism in education were historically inevitable, it would not follow that it is wholly desirable or admirable. But the placing of the movement in its historic setting shows that if there has been loss on one side there has been gain on the other. Large numbers of students may not be getting the most ideal education, but at all events they are getting some scientific training and intellectual outlook, while their ancestors only a few generations ago were not getting any higher schooling at all, and not much lower instruction. It is even possible that it is only in ratio that professional have gained so much upon liberal studies and that in absolute amount the latter have not appreciably lost.

"But the chief value of the historic interpretation is, it seems to me, the ground it gives for believing, with some reasonable confidence that present tendencies are transitory since they are the expression of a very rapid and recent social transition. It is natural, as was said, that newcomers to an intellectual and liberal tradition should bring with them their own old tradition. Since by necessity and through no fault of their own their background is mainly that of getting a secure livelihood and obtaining success in a career, why should not this aim be projected by them into education when they get a chance at it? Meantime there is some contact with intellectual pursuits and aims, some degree of reshaping of thought and purpose; and it may well be that a new and much more widely and solidly established tradition of culture is in process of development. The

[1] Opening address, Columbia University, Sept. 26, 1923.

great universities of the middle ages in Europe were groups of professional schools, and yet it cannot be doubted that they were largely the authors of the free artistic and intellectual movement that we call the Renaissance.

"After all, the friends of liberal and so-called cultural studies are somewhat to blame for the existing state of affairs which they deplore. They have often made a cult out of culture, and treated it as a sacred and highly protected industry. Our ultimate faith must be in the intrinsic appeal which things of the mind make to the human mind when the mind is brought in contact with them. An imagination sensitive to things of intellectual value and a power of discriminating choice among the values that surroundings offer are the chief marks of the cultivated mind. Even if, at first, these traits are only secondary accompaniments of pursuit of knowledge and mental discipline for the sake of professional ends, if they are as worthy and delightful as we friends of culture think they are, even incidental acquaintance with them ought to breed a more whole-hearted interest and devotion, till from the training of the professional there emerges the person who has all the interests of the amateur combined with the seriousness and trained skill of the profesfional.

"I do not believe however that we should sit idly by and wait passively for this hope of a future transformation of professional tendencies to be realized. There are things that can be done to facilitate and hasten the process. I hesitate to call culture a by-product because the word might seem to insinuate that it is unimportant. But culture is not a specific and direct aim. As moralists have said that happiness is best attained by not aiming directly at it but by devotion to things that bring happiness in their train, so it is with culture. It is a fruit and reward of other activities. There is nothing in the subject-matter or method of professional studies that prevents them having this fruitage. It is question after all of the spirit in which they are carried on. A school of law, medicine, engineering or theology that teaches only enough science to be a directly practical tool and teaches it only as a subordinate tool or device and not for the sake of insight into its principles will not be favorable to culture. But that is the fault of the spirit of the teaching and learning, not of the subjects taught or of the fact that useful application is ultimately to be made of the things learned. In other words, the more the

scientific spirit of inquiry and love of thinking is introduced into professional teaching, the surer is broad and liberal intellectual interest and taste to be the product.

"Again while professional studies have to be conducted with ultimate application in practice in view, this application may be to personal success, pecuniary and competitive, or it may be more widely social. There is a great difference in the attitude, for example, of the engineer who looks upon his special training as a means to the material success of himself or his employer, and the one who also sees in it a means of solving some of the most acute social problems of the present. In the degree in which the broad human factor enters in, culture is a consequence.

"I think our friends in the professional schools will not take offense if we say that many of us who are engaged in non-professional fields of inquiry and teaching often feel some misgivings at present tendencies, and wonder whether because of these tendencies consideration of philosophy and history, and the natural and social sciences is going to suffer. Fundamentally we are co-workers. The more theoretical studies do not attain their highest development until they find some application in human life, contributing indirectly at least to human freedom and wellbeing, while the more practical studies cannot reach their highest practicality save as they are animated by a disinterested spirit of inquiry. At present the current sets your way rather than ours, and time it did, you may think, in view of so much of the past of educational history. But in our common interest, we may ask that we join together to foster in any and every department of the university interest in inquiry and liberal discussion and love of scientific thinking, that is of free and disinterested thinking. When all teaching, whether labelled primarily liberal or professional, has this love as its goal, we shall develop in our schools what may be called the amateur professional; the man and woman who unites the seriousness, unity of purpose and skill of the professional with the breadth and freedom of thought and desire characteristic of the amateur."

JOHN DEWEY, in *School and Society*.

SCIENCE AND SOCIETY.[1]—"This amazing progress in science has been reflected in industry too. Since 1891 has come the internal combus-

[1] An address delivered at the Commencement at Stanford University, June, 1923.

tion engine which now gives the humblest laborer a car (California has one car for every four and a half inhabitants), the 'movie' giving him inexpensive, though as yet perhaps not always wholesome, recreation, the amplifier and the wireless, furnishing the world with a huge nervous system which transmits intelligence practically instantaneously throughout its whole giant frame, the airplane, in which man outsoars the eagle and outspeeds the swift, the X-ray with which he discovers the hidden sources of disease in his body, and antitoxines and antiseptics with which he has already banished forever certain of mankind's most awful plagues.

"The discoveries which I myself have seen since my graduation transcend, I think, in both number and in fundamental importance all those which the preceding two hundred years brought forth, and these latter far transcend all those of the preceding five thousand years. Such is the acceleration at which the processes of evolution in human affairs are now going on—a fact tremendously stimulating or terribly depressing according as one has great faith in man or little. . . .

"With revolution, then, increasingly difficult because of the growth and application of modern science I can see no hope of progress save as society adopts a form of government which permits of progress by *evolution* instead of by revolution, which makes possible the peaceful and gradual replacement of men and policies by new men and new policies when rulers lose their sense of proportion, as men in power are likely to do, and when policies have ceased to be productive of social results. *One of the greatest contributions of science to life is the discovery that progress is in general made by the evolutionary process.* Einstein does not replace Newton; he merely supplements him. *There are no revolutions in science.* In so far as Newtonian mechanics was a body of experimental facts it is eternally true. The whole of Newton is incorporated in Einstein. *Let the revolutionary reformer ponder well that fact.*

"The supreme question which the present generation faces is, then, can we make democracy work, not merely for America, but for the world? *Can we replace bullets by ballots?* That question is being asked more searchingly and more fearfully today than it was in 1891. The answer to it is to be given in the main by you, young graduates, and by others of like opportunity. *If an affirmative answer is found at all it will be, as I think, because the nations of the earth, including*

*our own, learn to take a more rational, a more objective, a more scientific attitude toward life and all its problems than any of them have as yet learned to take.* Some wag has said that the anti-evolutionist is opposed to evolution because it never did very much for him. I wish to take that witticism altogether seriously. It is literally true that a good many individuals are still *in the jungle* so far as their method of meeting life's problems, so far as the mainsprings of their conduct are concerned.

"For in the jungle ignorance and prejudice and impulse and emotion *must* determine conduct, and so *long as that is the case none other save the law of the jungle is possible.* Man himself is just now emerging from the jungle. It was only a few hundred years ago that he began to try to use the experimental and the objective method, to try to set aside all his prejudices and his proconceptions, to suspend his judgement until he had all the facts before him, to spare no pains to first see all sides of the situation and then to let his reason and his intelligence, instead of his passion and his prejudice, control his decisions. That is called the scientific method. Why? Not because it is applied only in the study of science, but because it has had its most striking development in the sciences, and because it finds its finest application today, though not its only one, in the analytical subjects of mathematics, physics, and chemistry. It is because of that method that these sciences have very recently made the astounding strides referred to a moment ago. It is because of it and what it has done already that scientists dare to hope that the law of the jungle can ultimately be displaced by the law of reason, not only in our domestic affairs but in our international ones as well. It is because of it that scientists in general believe that human life may be indefinitely enriched and human happiness enormously multiplied. . .

"The American newspaper which claims to have the largest circulation of any newspaper in the world displays as its motto the words of Stephen Decatur completely inexcusable, at least as they are usually understood, 'Our country! May she always be right, but our country right or wrong.' It was in very fact the international hates and misunderstandings caused by just that sort of teaching which brought on the great war. And yet there are a dozen American newspapers which are sedulously spreading not merely anti-British but anti-international propaganda of every discription. . .

"But if another such war as the last is started, I, for one, fear that the world may bid good-by to civilization. I am far from being a pessimist, but the history of central Asia, once at the center of the earth's civilization, and again, the very recent history of Russia, both show that it is possible to destroy civilization completely in a very few years of time. *Let those who deliberately set to work by distortion and untruth, by misrepresentation and cynical mistrust of motives, to stir up class hates and class prejudices in America, reflect well upon these things.* Some of them do it from base motives, because the mob has votes or pennies; others have good enough intentions but neither the intelligence nor the training to catch the scientific spirit and to be able, or even to try, to distinguish truth from falsehood. Well meaning men without poise or any sort of scientific discrimination, and highly trained and able men without conscience are about equally grave dangers to the wholesome development of human society. We have, indeed, not yet passed anti-evolution laws in California but we have many people even here who hasten to condemn evolution without having the remotest conception of what it is that they are condemning, nor the slightest interest in an objective study *of the evidence in the case which is all that 'the teaching of evolution' means*, men whose decisions have been formed, as are all decisions in the jungle, by instinct, by impulse, by inherited loves and hates, instead of by reason. Such people may be amiable and lovable, just as is any house dog, but they are a menace to democracy and to civilization, because ignorance and the designing men who fatten upon it control their votes and their influence. The churches are often charged by their critics with having more than their share of this type of jungle dwellers, but my own observation is that there are almost as many within the churches who have caught the scientific spirit as there are among the so-called scientists themselves, and many more who have caught what is even more essential to progress, the altruistic spirit. Medical science certainly is full of the jungle dwellers, as is shown by the existence of such a scientific anomaly as sects in medicine. For science is an objective study of the facts of nature. It uses any and all hypotheses which assist in correlating these facts, and its many hypotheses have had varying degrees of success in making such correlations, but science never commits itself as a matter of faith to any of them, not even to evolution. When it does so it ceases to be science. . .

"The longer one lives the less confidence does one have in any universal formula. The situation itself which I have portrayed suggests the only solution which there can be, namely, the slow growth of a larger degree of *both public intelligence and public conscience than we now have. Intelligence enables one to know better what he ought to do, while conscience keeps him doing as he knows he ought.* In America the school has concerned itself primarily with the first field, the church with the second. Which will play the larger role in getting us out of the jungle I will not attempt to say, but it appears to me fairly obvious that without both of them human society is headed for the rocks. But science, imbued with the spirit of service, which is the essence of religion, and religion guided by the intelligence, the intellectual honesty, the objectiveness, and the effectiveness which is characteristic of the spirit of science, can between them without a shadow of a doubt, in view of the rate at which discoveries are now being made and at which changes are being brought about transform this world in a generation. . .

"It is an exceedingly wholesome thing to work at some time in one's life in a field in which *the distinction between right and wrong, between loose and correct thinking,* cannot be obliterated or escaped; to learn there are eternal physical laws and presumably also eternal esthetic, moral, and social laws in conformity with which one must proceed if he is to arrive at correct results; to learn, too, that four-fifths of all the experiments which we make in our physical laboratories in the hope of developing new relations, establishing new laws, or opening up new avenues of progress, are found to be directed along wrong lines and have to be abandoned. There is no reason to suppose that any larger percentage of the efforts which are made toward social, political, or educational reforms are in the actual direction of progress. With a better realization of these facts we should have less worship of the new *merely because it is new,* fewer cubists in art, in literature, in education, in politics, in social reform. It is my own belief that no efforts toward social readjustments or toward the redistribution of wealth, such as so many well meaning people are urging in a thousand different ways, have one-tenth part as good a chance of contributing to human well being as have the efforts of the physicists, the chemists, the biologists, and the engineers toward the better understanding and the better control of nature. The distribution of wealth can, of course, be improved, and I welcome every

constructive and sane effort toward its improvement, but the results which can be accomplished for the well being of mankind by efforts in this direction seem to me to be utterly trivial in comparison with those which may be brought about by physical and biological research.

"In the fourth place—and this is in my opinion most important of all—*the spirit of religion and the spirit of science are going to join hands*, because the leaders of both religion and of science are coming increasingly to see life as a whole instead of from the pathetically narrow and unscientific point of view from which some in both fields have in the past looked upon it. This is one of the places at which you young graduates have your greatest opportunity to exert a very large influence upon your generation."

R. A. MILLIKAN, in *Science*.

PRESIDENTIAL ADDRESS: BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—"In watching the rapidity of this tide of advance in physics I have become more and more impressed by the power of the scientific method of extending our knowledge of Nature. Experiment, directed by the disciplined imagination either of an individual, or still better, of a group of individuals of varied mental outlook, is able to achieve results which far transcend the imagination alone of the greatest natural philosopher. Experiment without imagination, or imagination without recourse to experiment, can accomplish little, but, for effective progress, a happy blend of these two powers is necessary. The unknown appears as a dense mist before the eyes of men. In penetrating this obscurity we cannot invoke the aid of superman, but must depend on the combined efforts of a number of adequately trained ordinary men of scientific imagination. Each in his own special field of inquiry is enabled by the scientific method to penetrate a short distance, and his work reacts upon and influences the whole body of other workers. From time to time there arises an illuminating conception, based on accumulated knowledge, which lights up a large region and shows the connection between these individual efforts, so that a general advance follows. The attack begins anew on a wider front, and often with improved technical weapons. The conception which led to this advance often appears simple and obvious when once it has been put forward. This is a common experience, and the scientific man often

feels a sense of disappointment that he himself had not foreseen a development which ultimately seems so clear and inevitable.

"The intellectual interest due to the rapid growth of science today cannot fail to act as a stimulus to young men to join in scientific investigation. In every branch of science there are numerous problems of fundamental interest and importance which await solution. We may confidently predict an accelerated rate of progress of scientific discovery, beneficial to mankind certainly in a material, but possible even more so in an intellectual, sense. In order to obtain the best results certain conditions must, however, be fulfilled. It is necessary that our universities and other specific institutions should be liberally supported, so as not only to be in a position to train adequately young investigators of promise, but also to serve themselves as active centers of research. At the same time there must be a reasonable competence for those who have shown a capacity for original investigation. Not least, peace throughout the civilized world is as important for rapid scientific development as for general commercial prosperity. Indeed science is truly international, and for progress in many directions the co-operation of nations is as essential as the co-operation of individuals. Science, no less than industry, desires a stability not yet achieved in world conditions.

"There is an error far too prevalent today that science progresses by the demolition of former well established theories. Such is very rarely the case. For example, it is often stated that Einstein's general theory of relativity has overthrown the work of Newton on gravitation. No statement could be farther from the truth. Their works, in fact, are hardly comparable, for they deal with different fields of thought. So far as the work of Einstein is relevant to that of Newton, it is simply a generalization and broadening of its basis; in fact, a typical case of mathematical and physical development. In general, a great principle is not discarded but so modified that it rests on a broader and more stable basis.

"It is clear that the splendid period of scientific activity which we have reviewed tonight owes much of its success and intellectual appeal to the labors of those great men in the past, who wisely laid the sure foundations on which the scientific worker builds today, or to quote from the words inscribed in the dome of the National Galley, 'The works of those who have stood the test of ages have a claim

to that respect and veneration to which no modern can pretend.'"

ERNEST RUTHERFORD, in *Science*.

THE GAP BETWEEN PURE SCIENCE AND INDUSTRY.—"What can be done to vitalize and make dynamic in the minds of the rank and file of engineers and business men the need of pure research and the need of true teachers? One simple thing we may all do is to bring these two very closely allied questions in our engineering education to the forefront and to promote discussion of them before the fine faith and the spendid enthusiasm for research of a small and devoted group of men ends in tragedy. Not all men are fitted to teach and probably fewer still have a genius for research. When such a one is found the best all of us can do is to promote in every way possible his opportunity for service.

"One of the problems of promoting these opportunities for service seems to me to lie in the fact that few of those who know that it should be done are attempting to bridge the gap between pure science and the business of industry. We are so busy carrying out commercially today the things that Faraday and Helmholtz and others did for us before we were born that we do not take time to think of the men who must be doing that same sort of thinking if our children's children are to inherit the things that are of the intellect and of the mind, as well as the material prosperity earlier discoveries have given us.

"Pure research and every-day work are so far removed from each other that it is very difficult for either group to meet with a common understanding. What we need is a group of interpreters—men who will emphasize at every opportunity the place of pure research and the place of true teaching in our present industrial life. We need regularly to review the research now going on in our industry. We must see it as a whole by bringing together the separate entities, so that each man in research will know that he is really working with a larger group. The total pool of our research activity, which, after all, is relatively small, must appear in a new perspective to those of us workaday folk who have learned to subsist upon the superlative and who therefor fail to comprehend at times the true superlative in the painstaking, cloistered effort of the small minority who are at work now for our children's children."

F. M. FEIKER, Vice-President,
Society for Electrical Development, in the *Electrical World*.

THE EFFECTIVE AMERICAN UNIVERSITY SYSTEM.[1]—"There are some who favor elementary education, but think, or say they think, we spend too much money on higher schools. They prattle demagogically about the schools for the few as opposed to the schools for the many. Such men are able to count, but they are unable to think. The training of a leader through the medium of a university course is not for his personal ends alone. He is being trained to serve many, far more than he can serve with less training. When a great doctor, engineer, teacher, scientist or statesman passes, the multitudes suffer more losses than the immediate family of the genius concerned. . .

"Men are able to command whenever they have a chance or arrogated power; they are able to lead only when they have the intelligence and sympathy which makes power over people safe in their hands. The universities do not train men to command, but to lead. The distinction is as fundamental as that between slavery and freedom, between despotism and democracy. As a tyranny requires commanders, so a republic needs leaders. The university is an essential instrument in the arrangements of our political and social life. Without it we could not be an effective nation. . .

"The American continuous opportunity system of schools has a sanction in public efficiency as well as in equality of personal opportunity. It is a special system of getting more brains and more character for the public purpose than can be found in any small aristocratic caste. The American higher schools have culled and selected from the millions, not the thousands. They have had a wider field to hunt in.

"Their leaders have an immediate responsibility to make the prospect more effective. We have been fairly successful of late in weeding out, but not nearly so effective in attracting all the available talent to our doors.

"We shall have to extend our interest co-operatively into the lower schools that the gifted shall not halt with their training for lack of appreciation, encouragement, and financial aid. The university mind that does not reach the university doors is a reflection on the management of the school system, a greater reflection than when the incompetent or the uninterested pass through and gain the insignia of a power and usefulness which they do not really possess. The first professional problem of a university which aspires to be effective

[1] Address delivered at the Patriotic Meeting arranged by the National Educational Association and the American Council on Education on July 4, 1923, at Berkeley California.

in the true American sense is to find and beckon all the fit minds of the whole population to its training. . .

"It is well enough to say that teachers are born and not made. The statement has an ancient sanction, as ancient as that possessed by many other half lies. Teachers are born with different degrees of aptitude and all are capable of technical enrichment.

"A native genius without a scientific technique may not be as good as a middling man with a firm command of the principles of procedure. A seventeenth century genius without twentieth century science could not harness the waves of energy in the air as well as an ordinary undergraduate student in engineering who knows a few of the important modern techniques of electrical engineering. All this applies to teaching, though wise men aplenty will find it difficult to believe. . .

"Men fail to think less often because they cannot think than because they haven't the character to keep thinking straight. The character behind the mind is as important as the man behind the gun. We are all acquainted with the wish-thinker, who uses evidences to to make his desires. The selfish, the vain and the lazy of mind contribute to this group. They do not think straight because they have no disciplined working or thinking character behind their mental processes. The class room dedicated to science should carry two standards side by side—freedom to think, and no freedom to think slovenly or dishonestly. This is real intellectual liberty—freedom to think under logical law, much like political liberty—freedom to do as you please as long as law is obeyed." . . .

HENRY SUZZALLO, in *Educational Record.*

EDUCATIONAL RESEARCH AND THE AMERICAN SCHOOL PROGRAM.[1]—". . . The time comes, however, and this is the reason for the American program of educational research, when there will be a table of measurements prepared by somebody showing what is the resul there of a good program in physical education and the result there of the absence of such a program and that table will assume sovereign control. America has been favorable soil for the growth of the science of education. There is no other civilized nation under the sun so ill-equipped with central authorities in school matters as are we. There is no

[1] Address delivered at the opening general session of the National Education Association, San Francisco, July 2, 1923.

other nation which has realized as we have the needs and possibilities of a science of education. We have borrowed methods from Europe and have studied the older social sciences as models for our science of education, but it has remained for us and for this newest civilization to give lavish support to this newest of the sciences. We have built up the science of education because it is the central authority and the source of controlling powers in a democratic school system. . . .

"Converts though we may be to a rough and ready disregard for traditions, I am sure that you and I must recognize that the throwing away of a stability based on past practices makes inevitable the cultivation of a science which shall guide practice into more productive channels. There are two ways of avoiding social chaos; one is to adhere tenaciously to those traditions which have made survival thus far possible; the other is to find new ways through the exercise of intelligence. . . .

"The tests of general intelligence have been prominently before the reading public during the last twelve months. Many people do not realize that the science of psychology has been hard at work for three-quarters of a century trying to devise ways of securing an exact and useful measure of human traits and human abilities. The organization of the American Army in 1917 furnished an opportunity for the psychologists to apply on a vast scale the methods which the laboratory has produced.

"Since the war the problem of carrying over the lessons of the army tests into peace conditions has absorbed much attention and given rise to many disagreements. Some there are who have recklessly asserted for tests possibilities which every careful student of human nature knows to be preposterous. There is an intoxication of enthusiasm which is sometimes as inconvenient for the public as other forms of unbalanced irrationality. That tests have been advertised for purposes to which they were and are inadequate is certainly true. The time is coming rapidly, however, when tests will be understood, when their limitations and their virtues will be equally known, and when schools will find that general intelligence tests are indeed no panacea for all ills but very useful additions to the ordinary devices used in classifying students and organizing school work. . . . .

"There is urgent need of a great national center in our Federal Government for the cultivation of scientific information about schools. Many of us do not realize it, but our Bureau of Education

supplies by far the most elaborate and reliable reports on schools that are to be found anywhere in the world. The reports of our bureau are the envy of European students of education. The bureau thus exhibits today the beginnings of the kind of federal support for investigation which needs to be cultivated on a much larger scale. What we ought to seek is an immediate extension of the range of federal support for educational researches and reports. For one, I favor a research department of education after the pattern of agriculture and commerce.

"My plea to this association is that it make itself the center for the promotion of the one type of control that can find a permanent home on this continent, namely, control through research. My plea is for a union of forces in the careful study of our school problems, for a formulation of principles of organization and methods of work through co-operative inquiry, for the presentation of a solid front to Congress and to the people of the United States in the request for a federal department equipped to make scientific studies and to supply that co-ordination and reinforcement which are the greatest needs of our present-day science of education."

CHARLES H. JUDD, in the *Educational Record*.

NATIONAL SERVICE AND RESEARCH.—"No one can live long in Washington or watch closely the economic, political, educational and social activities of the nation without realizing the dire need—the vital necessity of reliable facts and sensible interpretations thereof. Congress itself fully realizes the need and so makes many investigations and establishes occasional fact-finding commissions. But the public seldom sees the real results, since both congressmen and the public press are always under pressure to be guided in their use of facts by political expediency.

"How is this nation ever going to solve intelligently such problems as immigration, the coal supply, the merchant marine or the world court—to mention only four of the immediate ones—without facts compiled and presented with intellectual honesty by unbiased, disinterested, non-partisan observers? How can we wisely determine, without exhaustive and reliable research covering all the facts involved, whether the present marked tendency to centralize governmental control in Washington is the best way to insure permanence to our institutions?

"Recognition of the need for organized objective study of the actual operations of government, industry, and education is not new. Numerous institutions such as the Institute for Government Research have been established on private foundations and have already published many important studies. The recently established Residence Foundation, which provides living quarters, where thirty research students in economics and political science can dwell together while making investigations in these subjects, is a practical step forward in meeting national needs in this matter.

"Another highly significant enterprise in these fields is the recent organization of the National Transportation Institute. National organizations representing eleven fundamental phases of economic life—agriculture, banking, forestry, labor, manufacturing, public utilities, trade, mining, rail transportation, highway transportation, and water transportation—have united in this project to secure and publish reliable information concerning the actual operation of transportation as it affects all these agencies in meeting national requirements. The underlying idea is that economic life will be secure and successful in proportion as it bases its operations on facts and enlightened interpretation thereof. The institute is supported by membership fees from its constituent organizations and individual firms. It has just opened an office in Washington and is operating a research division to gather facts, a publicity division to disseminate the facts and an education division to develop educational material, methods and relations.

"There are resident in Washington a large number of men who are engaged in studying problems of the type under discussion both within the federal offices and in privately controlled agencies. Two years ago a number of these men established a University Center for Research. It is a voluntary association of scholars organized in a self-governing body called the Board of Research Advisers. Each of these men has agreed to give without charge individual aid to properly qualified advanced students in history, political science, international law, economics, statistics and education. Each of the members of the board knows what specific problems are pressing for solution in his special line of work and how each solution will help in solving national issues. Each is familiar both with the rich reservoirs of research material available in Washington and with the methods of securing access to this material. Any assistance

they can give in promoting sound research in their special field of study will be gladly given. . .

"It must not be inferred that this short list contains all the questions that must be answered in the process of strengthening the factual foundation for political and economic action. The number of such questions is literally infinite. These are merely samples—starting points—where one can begin an investigation which will help solve a larger problem and lead on to a wide range of new problems.

"This list is presented to advanced students everywhere, in universities, in industries, in private life, as a hint of the vast range of possible national service through co-operation in scientific study of these problems of human relations. As the complexity of national life increases and international relations grow more perplexing, there is an ever-increasing demand for men who have acquired a national and international point of view. By devoting a year or so to study of the sort here described, one can do his bit in solving the perplexities now bewildering the American people and in so doing acquire for himself vision and inspiration that makes him a more effective citizen in whatever community his lot may be cast.

*From the Division of Political Science*

The Monroe Doctrine a century after its promulgation.

The relation between the Executive and Legislative in the Republics of the American Continent.

The tariff systems of the American Republics.

The fiscal system of the American Republics as a basis of national credit.

Any phase of national administration.

The National Government in relation to specific activities(. . . such as 'The National Government in relation to education, to commerce, to scientific research, to agriculture, etc.').

The regulative functions of the National Government (. . . such as pure food regulations, genuine label, grain standards, meat packing, etc.').

The government and administration of individual dependencies (. . . such as Alaska, the Philippines, Porto Rico, Hawaii, Canal Zone, Virgin Islands).

The exercise of quasi-legislative and quasi-judicial functions by administrative officers and boards of the National Government.

The history and development of the Department of Justice.

The administrative organization of the individual states.

The constitutional development of the individual state.

*From the Division of Economics*

The simplification of freight classifications and rates.

The adjustment of freight rates as between various classes of commodities.

To what extent do the social and economic need of the country require an extension of our existing systems of transportation?

Economic considerations related to the consolidation of railroads.

Contributions to corporate history reflected in the records of the Bureau of Valuation.

Aids, gifts, grants and donations as reflected in the records of the Bureau of Valuation.

The pooling of freight equipment.

The development of the electric railway industry in the United States.

The recapture provision of the Transportation Act, 1920.

The tariff systems of individual foreign countries or groups of countries.

Finance and currency situation in European countries, or groups, or individual countries.

The economic results of Soviet rule in Russia.

The economics effects of the dissolution of the Austro-Hungarian Empire.

The reparations problem.

The Near Eastern problem.

The redistribution of agricultural land in Eastern Europe.

Atlantic and Gulf Ports *vs.* Pacific Ports in relation to long-shoremen's wages and efficiency of labor.

Is the recent boom in co-operation more likely to be permanent than former efforts along the same line?

The wasting of men in industry. Wage levels by economic organizations *vs.* Legislative enactments.

Can unemployment be controlled?

Can labor turnover be utilized in vocational guidance work?

*From the Division of History*

The development of the nominating convention.

The formation of the Jacksonian democratic party.

The valuation of slave property.

The taxation of slaves.

East Florida in the Second Spanish Period (1783–1819).

New Mexico in the 18th Century.

Diplomatic relations with Prussia.

The development of the public land system.

Operations of the American Navy in suppression of the African slave trade.

The history of the American Colonization Society.

The nominations of 1848.

The domestic slave trade.

The administration of Louisiana under the French régime. (Governor, ordonnateur, superior council, justice, notaries, police, military forces, etc.)

Social life in Louisiana under the French régime. (Origins of the population, social classes, church, amusements, culture, etc.)

Survivals of French institutions in the Mississippi Valley. (To what extent did French institutions survive and affect the development of American institutions in the territory comprised in the French régime?)

Relations of French and Indians in the Mississippi Valley.

Land tenure in the Mississippi Valley under the French régime. . . . History of the various committees of Congress. . .

. . . Studies of the civil government of occupied territory, such as the government of Cuba during the second intervention. . .

. . . Series of detailed studies of diplomatic relations with various countries.

. . . Series of studies dealing with the history of the various departments of the Federal Government.

Racial elements in the United States.

Old world environment, including racial, religious and other prejudices, state of culture, economic conditions, political ideas, etc.

Reasons for immigration to America. Acceleration of immigration by artificial means, units of immigration, families, etc.

Distribution in America.

Reaction of American conditions.

Retention of old customs, language, culture, etc.

Relations with country of origin.

Influence on and modification by other elements.

Effect of propaganda.

Second and later generations. Modifications of physical type.

Return to old world.

A study of the influence of the League to Enforce Peace as affecting public opinion with respect to the Treaty with Germany; 1915–1920.

The relations of the Continental Congress to the Revolutionary Armies.

The following important problems at the outbreak of the war:

The military situation of the U. S. at the outbreak of a war.

The organization and training of the armies.

Maintenance of the armies.

Transition to the peace basis.

The above problems may be treated from any desired point of view—civil or military, economic, etc. 'The University Center will render a conspicuous service to the country if it can bring before students:

(a) That such problems exist.

(b) That they are of practical importance to the non-military world.

(c) That they are capable of scientific investigation.

(d) That the Historical Section of the War College is ready and anxious to assist in planning and carrying out such investigation.'

The transfer, during the Revolutionary Period, from English to French vessels, of the commerce between America and Europe.

The kinds of money in actual use in the United States, from the establishment of the Government to 1825.

The influence of George Mason in the formation of the Constitution of the United States.

The legislative career of George Washington.

The growth of the democratic idea in Virginia.

A study of the origins of the constitutions of the states formed from the North-

west Territory, showing the influence of New England, New York, and Virginia.

The career of Thomas Worthington, one of the first senators from Ohio. His experiment in freeing and settling slaves inherited by him.

The influence of the Home Missionary Society in the development of the northwest.

Origin and character of the fighting sailors of the Revolution.

Origin and character of the navy personnel of the War of 1812.

Sea power as a decisive factor in the United States history.

Private capital and enterprise in the naval warfare of the Revolution.

History of the Naval War College.

The submarine boats of the Civil War.

United States naval strategy in the Spanish-American War.

United States naval spies and secret agencies.

Functions and activities of U. S. naval attachés.

*From Division of Education*

Origin and development of educational activities of the Federal Government (Bureau of Education, the States Relations Service of the Department of Agriculture, the Naturalization Bureau of the Department of Labor, the Federal Board for Vocational Education, the Army, the Navy etc.).

Educational bills and projects presented to Congress since 1787.

Origin and influence of the Morrill Act of 1862.

Origin and results of the Smith-Lever Act. Of the Smith-Hughes Act.

Research functions and activities of the Federal Government.

Proposals for a national university and their fate.

Education in Alaska. In Porto Rico. In Hawaii. In the Philippines. Indian education.

What educational principles and practices are universally recognized in all federal and state educational laws?

Methods of securing uniformity in textbooks, state adoptions, etc.

State methods of financing public education.

Statistics of education.

Continuation school laws and their results.

Vocational guidance in school systems.

To what extent are intelligence tests in regular use in schools?

Objective proficiency tests as controls of school progress.

Co-operation between schools and industries.

The relations between education and government in a democracy.

C. R. MANN in the *Educational Record*.

RELATION OF THE UNIVERSITY TO THE STATE.[1]—"It is in the province of our state institution to become more catholic, more thoroughly tempered with that liberal spirit which refuses to rush for immediate results at the sacrifice of spiritual gifts. In other words, in the solu-

[1] Inaugural address of the President of the University of Arizona.

tion of the specific problems that we have already discussed, if the engineer, the mine executive, the lawyer, the educator, the agriculturist, does not go from our gates with the right background of social and cultural ideals, then he cannot perform the duties that he will be called upon to perform as a technician, as a citizen and as a parent. If we cannot accomplish this well-rounded training in the customary period of time then it is for us to so develop our work that it can be accomplished. Let us begin at the beginning to work for the creation of men and women rather than for the mechanical ordering of university courses. No course or curriculum is worth while in itself. It can only be considered a tool or a guide to be put into the hands of the instructor and of the student that they may create about them an atmosphere for the development of oncoming generations. When we talk in terms of curricula or courses of study, we are talking of the unity of knowledge, and it may well be that some particular field of study will take a longer time for mastery than others. If a course is longer or shorter than the customary courses, it may be stated that our standards will be lowered or that our standards are too high, and we shall necessarily suffer a loss in the number of students that should come to us. This is starting with the wrong premise, for we need not and must not break too far away from those things which the past has proved most worth while, but we can through a reordering bring about a more advantageous development of the work.

"Answers to a recent questionnaire to some forty American colleges and universities of first rank show that there is no specific method of counsel on the choice of vocational and educational work to be undertaken, and that the maximum amount of time spent by any of these universities with each of the incoming students concerning the work that they are to undertake is less than twenty minutes. Surely this is an indictment against our present system of higher education. There are obvious dangers in any attempt to give counsel to young men and young women on the choice of their life career, but would it not be better for us to err in attempting to make it possible for them to choose a vocation and to know of the relationships of citizenship than to proceed in the present haphazard unscientific way?

"Another problem that we should consider is that of limiting our student bodies so that only those best able to profit by higher education will be admitted to our university. Throughout the nation

great emphasis is being laid upon the question at this particular time on account of the great numbers making application for admission to our univerisites. I believe the answers to the questions involved are not so difficult to find as they at first might seem. I have already suggested that integrity of the state depends upon the individual initiative and sound sense—the equipment of the everyday man. The history of our state, if we believe in democracy, will be written in the undertakings of such men. So it is our responsibility to take all young men and young women who can profit by higher instruction and give them a sound attitude of mind, a well-rounded social perspective, ever mindful that they will not all be social leaders, but that out of the number there will be that few who will want to carry on certain lines of advanced training that will set them apart in their chosen field. The big thing to remember is that the university is not the end. I want you to be less interested in numbers, and think less of crowded conditions, and more of the fitness of our students. In building our university we must depend upon certain social, economic and educational selective factors that are steadily at work. If the processes of selection are not just, if they are not properly organized, or if they are not searching enough, then we should see to it that standards are set so that those students who come to us will be ready for the work they are to undertake. . .

"The discussion now takes us to a consideration of the course of study. It is my sincere desire that we shall not allow our elective system in the College of Letters, Arts and Sciences to have the scattering influence that it has had in certain other universities. I think that we should demand of each student that he attempt to relate his various studies into a definitely ordered scheme of thought so that he can begin to see the system that determines values, and the first principles that underlie all that we think and do. In order to expect this of the student we must organize and order our courses so that they can be thus fitted together. We must be unwilling to include materials that are colorless, matters of no importance to the specific end for which the student has set his ambitions. I am afraid that in a general criticism I should have to say with President Chase 'the college has seemed afraid to stress anything very much. Instead of setting resolutely to work to attempt as intelligently as possible to state and practice its convictions as to the fundamentals of culture in the twentieth century democratic state, it has clung in

its heart to those things that were basic in earlier generations when life and higher education were both wholly different enterprises from today.' It is true that some new courses have been introduced to meet present day demands, but there has been surprisingly little effort to tie the whole group together or to evaluate its parts in terms of modern life. With this in mind we must come to some clearer understanding of what knowledge is most worth while in a liberal education of today. This does not mean that the College of Letters, Arts and Sciences should abandon its function of presenting courses which have no direct vocational motive, but must abandon its timidity and irresolution as an interpreter of the strenuous and democratic life that we find about us. Any course of study must take this life as its starting-point, do its best to determine what fundamental knowledge is necessary for the development of our youth, and further insist that departmental barriers should not interfere with the unification of the knowledge necessary to present it. Unless our curricula are so ordered our university will be the weaker and our State the poorer. . .

"I would not advocate the teaching of any symbolism or mysticism on which the different churches and sects have always insisted, but I do believe that there are certain fundamental spiritual and ethical principles and practices which ought to be discussed in training for leadership if we are not to lose certain strengths from our democratic society."

C. H. MARVIN, in *School and Society.*

TENDENCIES AND PROBLEMS IN THE LAND-GRANT INSTITUTIONS.[1]—"The men whom we are training at our land-grant institutions are becoming concerned to an increasing extent with human problems and with the broader questions of public life. The duties and responsibilities of our graduates are constantly widening. Many of our graduates will become directors of men and will be expected to have knowledge not only of materials, methods and machines, but also of men. In industry they will often stand as the intermediary between employers and employees and will be responsible for the harmonious working of the agencies of capital and labor. The future of industry depends upon leaders who have not only technical knowledge, but also breadth of view, understanding of human problems, courage

[1] Address of the Vice-President of the Association of Land-Grant Colleges.

and capacity to bring out the individual in industry, so that our social structure remains intact.

"It is very doubtful as to whether we can train leaders to meet the increasingly complicated problems of industry without either advancing our entrance requirements or lengthening the course of study to five or six years. While it is undesirable to standardize education for different institutions, the time is now ripe for this association to make a careful investigation in order to determine whether our institutions should provide additional training for those who are to be the future leaders in industry and in the scientific professions."

A. A. POTTER.

ADMISSION TO AND ELIMINATION FROM TAX-SUPPORTED STATE INSTITUTIONS.—"*College record.* Actual performance in the college classroom is the final measure of ability to do college work. The complete data on every student whose first mid-quarter reports show poor work should be assembled, and at the close of the first quarter, the interpretation of the first quarter's grades in the light of the five pertinent measures already on file and available, should suffice for the prompt elimination at that time of many who would fail and be dropped later, and for the continuation of many who show promise of satisfactory work when once established.

"It is submitted therefore that more efficient schemes of admission and elimination may be developed without the requirement of large additional machinery, additional time on the part of certifying officers, or complicated manipulation of data at the university. Certain additions to the machinery already in use will save much time and money, now unwisely and futilely expended by students and state. To the present standardized measures of (1) the high school record of subjects passed and (2) the university grades for the first or second quarter, should be added four pertinent and available supplementary measures:

(1) The high school record of failures and withdrawals.
(2) The high school record of interests, activities and talents.
(3) The high school estimate of morale or character traits.
(4) The high school and university record of intelligence examintions."

A. C. ROBERTS, in *School and Society.*

PRESIDENTIAL ADDRESS TO THE BRITISH ASSOCIATION OF UNIVERSITY TEACHERS.—"In my opinion the primary object of the Association of University Teachers is to bring about unity and harmony in the Universities of this country, to promote a spirit of brotherhood and professional pride, an *esprit de corps* amongst the staffs, together with friendly and personal co-operation with the many non-academic men who are devoting their abilities to the good of the Universities.

"A great beginning has been made. It is painful to recall the disunion of a few years ago—the deep gulf between lecturers and professors is now obliterated in most institutions. The bitterness felt by members of the academic staff toward the governing bodies of the Universities, who seemed to be unaware of the extreme economic pressure under which they were suffering, is now replaced by mutual confidence. . .

"For any one who has fully realized the significance of what I consider to be our primary object, it would be impossible to entertain the idea that our Association corresponds to a Trades' Union. Still further, it would be impossible to think that it is any part of our plan to oppose our governing bodies. The series of memorable conferences which we have held with them and which will be continued, relegates that conception to a byegone period, and I should like to plead that utterances incompatible with this should never again find expression in academic circles. In fact, we are depending on our friends, the non-academic members of the governing bodies, to take—as in fact they are taking—the larger share in securing adequate public support for the Universities, to enable these to fulfil their duties and to help the country to realize how vital to civilization they are.

"What are the means of obtaining this object of unity and harmony? First and foremost, personal contact—getting together and comparing notes on subjects of importance in the work of the Universities. This will automatically broaden our ideas and lead to considered and informed opinion on such questions. . .

"Now it is clear that economic questions must come in for consideration, particularly when they threaten to impair the work of the Universities and when the Universities themselves are in such financial straits. To those who have become aware of the miserable salaries which have actually been paid to members of University staffs, and of the totally inadequate pittances to which

older members have had to look forward on retirement, no apology or explanation is needed for the fact that the economic questions of salaries and superannuation have occupied a foremost place in our considerations and anxieties of the past few years. . .

"The Universities are faced with all sorts of problems ranging from entrance requirements to standards of post graduate degrees and facilities for advanced study and research, and each is dealing with them as best it can, generally with but little exchange of opinions and experience, and often with unexpected consequences in other directions. Yet it is necessary to take long views, and to foresee the ultimate results in their bearing upon other Universities and upon the community. These are surely the topics upon which we are well qualified to deliberate, for we are the living body of the Universities. . .

"Briefly our proposed method of dealing with each of these subjects is to appoint a small representative committee to collect information and prepare an agendum or provisional report which will be sent to each local association for full discussion and criticism. The results will be embodied in a revision by the Sub-Committee of the report, and it may then be re-submitted to each of the local associations, but finally it will come to the Central Council to be hammered into shape, and then placed on record as our opinion for the benefit of the public both within and without the Universities. In all this there can be no suggestion of interference with the autonomy of each University. . .

"Means must be contrived to keep in closer touch with each other and with University administrators, educationists, and last, but not least, the public itself. I would appeal to local associations to develop their social activities, and to include in these members of the administrative bodies. . .

"While we must prepare practical proposals to obtain public support for our Universities, we must no longer neglect the many urgent problems upon which our members are called to pronounce. The Association of University Teachers must be a forum for the discussion of the University topics. Those who have been most active in the work of our Association have set their hands to the task in the confident hope of advancing University education and research to a standard which may be commensurate with the needs of the Nation.

J. W. McBain, in the *University Bulletin*.

THE FEDERAL TECHNICAL SCHOOL IN ZURICH.—"The war and the peace have brought few changes to the Swiss Federal Technical School, or 'The Polytechnikum,' as it is locally known. . .

"It is chiefly in the make-up of the student body that the observer notes a marked change. It was once the pride of Switzerland and of the Polytechnikum that the famous school was international as far as its student body was concerned. Foreign students were welcomed and treated on exactly the same terms as native Swiss, so that before the war it was not unusual to find as high as 50 per cent of foreigners in the engineering section of the school. During the war Swiss institutions were threatened with an inundation of foreign students from the surrounding nations and, in order to protect the native students who were practically forced to remain in Switzerland, they were compelled to give the natives priority rights and, in addition, to increase tuition and other fees. . . The tuition for Swiss was raised to 300 francs a year, an increase of 100 francs, while foreigners were and still are charged 600 francs a year with laboratory and other fees in the same proportion. The result is the practical elimination of students from countries whose exchange is low and a marked reduction in the total number of foreign students generally. . .

"The organization of the school is not unlike the organization of certain of our state universities. As it is a national institution it derives the greater part of its income from indirect taxation and is consequently dependent upon the Federal Council and the Federal Assembly for its existence. . . The Federal Council appoints the School Council, its president, and vice-president for a period of five years; elects the professors (a perfunctory matter as the nominal tions usually originate in the faculty or school council and are merely ratified by the Federal Council), fixes the salaries; presents to the Federal Assembly the annual budget of the school and all other matters for which legislative authority is necessary; audits the annual accounts of the school and accepts or rejects legacies.

"The immediate executive power is exercised by the school council the president of which is practically the president of the school in the American sense of the term. The council consists of seven members, *i.e.*, six besides the president, who act as supervisors and, in a sense, trustees. . .

"The duties of the council are numerous and varied, comprising

roughly the duties of the president, trustees, and supervisors of an American college. . . As with us the president and his secretary perform most of the real work, the other members of the council acting chiefly in an advisory capacity. . .

"The general faculty is composed of all the professors, assistant professors and the teachers of the Polytechnikum. It meets at least once a year and may be convoked by the rector, the president of the school council or by petition of its own members. The duties of the general faculty are to nominate the rector and vice-rector and to discuss matters pertaining to the welfare of the school and make recommendations and 'to bring to the attention of the authorities useful reforms.'

"The rector and vice-rector are appointed for a period of two years. Only full professors are eligible. They may be reelected but may not serve more than three successive terms. The rector is relieved from part of his teaching work during his period of office. He attends the meetings of the school council but has no vote. His chief duties are to preside over the general faculty, transmit to the council the recommendations of the faculty, build the roster of hours, pass on the admission of special students, keep student rolls and records, provide for all examinations, and in general supervise and advise students on questions of curriculum and discipline. The office bears a certain resemblance to that of some American deans.

"The Polytechnikum is divided into eleven departments of which ten are special schools. . .

"Each of these departments has a faculty of its own to which all the teachers who give instruction in the department belong. Teachers of lower grade than a full professor have a vote only in questions which concern their own teaching. . . The chairman of all the departments form an advisory committee which meets at the call of the president of the school council or the rector or when three chairmen request a meeting. . .

"The entrance requirements of the Polytechnikum are considerably more severe than those of any technical school in the United States with the exception of those few schools which demand either two or three years of arts work or a bachelor's degree as a prerequisite. . .

"Instruction is given in German, French or Italian by lectures,

laboratory and drawing exercises, the so-called *Repetitorien* and seminaries. The *Repetitorium* is a sort of conference between the professor in charge of a course of lectures and the students. Originally it was a genuine question and answer recitation not unlike the class-room work of an American college. The purpose was avowedly to drive home and clinch the matter given in the lectures, more attention being paid to elaboration and explanation of difficult problems and theories than to quizzing the student. In recent years these recitation periods developed or degenerated, according to view-point, into more or less informal meetings in which the student may present his difficulties. Some instructors have returned to the old methods and the general trend seems to be that way not only in the Technical School but likewise in the University of Zurich where it was surprising to find a number of professors really teaching instead of lecturing and a general discussion going on as to the advisability of requiring a certain amount of class-room work of each professor. . .

"The regulations governing scholarship, or what might be called a progress rule, are different in the different schools. In the general engineering department the first preliminary examination for a diploma may be taken at the earliest at the beginning of the third semester and at the latest at the beginning of the fifth semester. In other words the student is allowed a maximum of two years in which to do one year's work. . .

"The second preliminary examination may be taken, at the earliest, at the beginning of the fifth semester and, at the latest, two years after the first preliminary. . .

"The final 'diploma examination' may not be taken before the completion of the eighth full semester. . .

"The whole atmosphere of the place is saturated with cultural influences and even the professors of engineering give more than mere lip service to the cause. . . The emphasis laid upon this section does not mean that the authorities discourage work in mathematics and natural science. It is felt that the average student, however, will get his scientific training either as preparation for or as a part of his technical course; in fact, that there is great danger that the technical student will become too narrow and too materialistic without the counter influence which culture training furnishes. . . .

The Polytechnikum confers, besides the school diplomas, the

degree of Doctor of Technology, Doctor of Science and Doctor of Mathematics based upon work done over and above that required for the diploma and the completion of a satisfactory thesis. The doctor's examination is like that at the ordinary university. Honorary degrees are conferred for distinguished service in science.

There are a number of conclusions which may be drawn from a study of the Polytechnikum, some of which may be suggestive for Americans.

1. The preliminary and final examinations place great responsibility upon the student and enable him to get a view of the whole field in which he is working, a view difficult to obtain when the student's responsibility ends with a semester examination. In addition the system does away with much of the ranking in vogue elsewhere, the bugbear of many a professor. It saves the time of both student and professor during the actual semester, as the examinations are not held during the regular term but either precede or follow it.

2. It seems clear that the Swiss are interested primarily (*i.e.*, in the Federal Technical School) in producing real engineers. By 'real engineer' I mean a scientifically trained professional expert in technology, not a mere mechanic or contractor or business executive. Engineering is, therefore, a profession not a trade.

3. The Swiss believe and their practice confirms their theory, that an engineer needs time to develop and to study for his profession. The preliminary education is practically the same as that demanded for law, medicine, university teaching or theology and the number of semesters required for graduation compares favorably with the semesters required for the other professions.

4. It is the policy of the Polytechnikum to encourage the acquisition of general culture as a means of educating the student before and during his professional course and as a means of furnishing him with interests outside his professional work.

P. M. PALMER, in *School and Society*.

# LOCAL AND CHAPTER NOTES

BOSTON UNIVERSITY'S FIFTIETH ANNIVERSARY.—On Friday and Saturday, October 25th and 26th, Boston University celebrated its semi-centennial with an interesting program of which a somewhat novel feature was a group of educational conferences with addresses by guests—prominent educators and specialists in their respective fields. In connection with the celebration a committee is preparing a history of Boston University.

CLARK UNIVERSITY.—The following resolutions signed by a group of more than twenty prominent Clark alumni on the Pacific Coast have been addressed to the Trustees:

"WHEREAS, Clark University Alumni of the Pacific Coast have learned, with increasing anxiety, of the new academic policy at Clark, and

WHEREAS, the new administration has been unable to maintain the confidence of the faculty and student body, and

WHEREAS, the institution has already been seriously handicapped by the withdrawal of certain of its best instructors, and

WHEREAS, the scholastic reputation of the university is suffering regrettably, and

WHEREAS, the situation is such that instructors of high attainment and advanced students with a serious purpose in mind will not be attracted to the institution, and

WHEREAS, the present administration seems indifferent to the history and traditions of Clark University, therefore, be it

*Resolved*, That the alumni of the Pacific Coast urge upon the board of trustees of Clark University the immediate removal of the present administration and the selection of men who will be able to raise the standards of the university to their former level and to secure and hold the confidence of the entire faculty and student body, and be it further

*Resolved*, That the alumni of the Pacific Coast heartily endorse the recent action of the Washington Alumni Club in adopting a set of resolutions of like purport, and be it further

*Resolved*, That a copy of these resolutions be sent to each member of the board of trustees and the Washington Alumni Club.

"The significance in the resolutions lies in the fact that almost without exception, the signers are in possession of the Clark doctorate, and have obtained the degree under the guidance of the old administration. Their objections in the present articles, are based upon

their desire to see Clark returned to a standard of specialization in certain subjects in which it had proven its superiority rather than in one subject whose merits must yet be proved."

*Boston Transcript.*

DELAWARE.—"The University of Delaware is not our largest or best known educational institution, but it has inaugurated an experiment which may give it fame as the pioneer of a most important movement. It has permitted eight students to go abroad for a year with a member of the modern-language staff of the university. They will study in French universities, the time to be credited as their junior year in college. The scheme provides what American students so much need, the chance to study modern languages and acquire an international outlook while retaining their connection with, and maintaining their standing in, a college in the United States. Our only misgiving is that, if acquiring a foreign language is the chief end, the period of residence ought to be two years instead of one. But this is a detail subject to modification. Our hope is that the idea will spread to other colleges and become a general and accepted part of American educational technique."

The *Nation.*

HAMLINE: A COLLEGE COURSE IN GENERAL READING.—"Lord Bacon's discarnate spirit will probably have to admit that if his former observations on reading and 'studies' were well founded, the American college student cannot be justly accused of intoxication. When there are inebriate signs he cannot refer them to any such heady wine as '*reading*,' rather must we blame lecture and textbook cramming, a process which results in no divine afflatus, but only a lazy flatulence. . . .

"At Hamline University a genuine, thorough-going attempt to palliate, possibly, as I said in the beginning, to cure the evil, is now in the making; entering its second year, one year of fairly successful operation behind, and a more hopeful year before. The plan in its essentials is as follows:

1. Every candidate for graduation is required to read ten books selected from a list of seventy with the advice of a member of the faculty committee or the head of the department in which he is taking major work.

2. Candidates for *honors* read fifteen; for *high honors*, twenty; and for *highest honors*, twenty-five.

3. A three-hour credit, as for a regular semester course, is allowed for this course, and while the total requirement for graduation is correspondingly increased, credits thus gained are computed for honor points and general scholastic standing.

4. Students are urged to begin reading in the freshman year or early in the sophomore year at latest.

5. A preliminary examination is given to juniors, at which time the examining committee may point out defects observable in methods or reading, and make suggestions for future reading.

6. A final examination is held for seniors during the first semester.

"The faculty of Hamline University, while differing as to details, is a unit in the belief that this course has a great deal of promise. The majority of students, far from resenting an additional requirement, seem actually to enjoy being pushed a little toward books that are not so forbidding on acquaintance as they feared. This statement is made in the hope of extending the idea and getting helpful criticism."

T. P. BEYER, in the *English Journal*.

HARVARD: A NEW COURSE FOR FRESHMEN.—"A series of lectures dealing with 'the relationship of knowledge and education' is to be given to freshmen at Harvard University this year in connection with the prescribed course in English composition. One lecture is to be given every other week by a member of the Harvard faculty who is an authority in his field. In connection with each lecture all members of the course will be required to do a piece of reading and to write a theme on the lecture and the reading.

"The introductory lecture of the series will be on 'Education at Harvard College' and the essay to be read in connection with it will be Emerson's 'The American Scholar.' The opening group of three lectures comes under the general heading of 'The physical basis of civilization' and includes lectures on science and chemistry, mathematics, physics, astronomy and biology.

"The second main division will deal with 'Primitive civilization.' At the conclusion of the series President Lowell will sum up the main points of each separate division and show their relation to each other and to the vital parts of life and the organization of society."

MOUNT HOLYOKE.—"Thirty-one students are enrolled at Mount Holyoke College for the degree 'with high honor.' Candidacy for a

degree with high honor relieves a student of special ability from certain periods of class work, and allows her to devote two-fifths of her time during her senior year to intensive work in her major subject, part of which will be done under individual instruction. The usual requirement for a candidate for this degree is that she should have attained an average of 85 per cent or more in all the work taken in college, although in exceptional cases a student whose work in her major subject is outstanding may be recommended as a candidate by the major department without having attained this average."

MASSACHUSETTS SURVEY OF HIGHER EDUCATION.—"Massachusetts has a wealth of universities and colleges scarcely equaled in any other State in the Union. But are there enough to take care adequately and properly of all the graduates of high schools in Massachusetts who are able and anxious to continue their education? If not, what further facilities are needed and how are they to be provided? These are the questions which a special commission on technical and higher education appointed last summer by Gov. Channing Cox was asked to consider and solve.

"Inasmuch as the commission is composed of busy men who realized that the problem was so large and complex as to require the greatest possible amount of study and analysis, the commission turned to the United States Bureau of Education for assistance. Instead of suggesting the appointment of a commission of educators to undertake the survey and make recommendations on the basis of the facts secured, as has usually been done in the past, the bureau decided to detail Dr. George F. Zook, specialist in higher education, to direct the survey, which was to be on a fact-finding basis, leaving the local commission appointed by the governor to study the report and make such recommendations as seemed wise to the members of this commission.

"In the conduct of the survey Doctor Zook has had the assistance of a number of well-known educators, who have undertaken special investigations. . . . .

"A large amount of information bearing on the situation has been placed before the survey commission, which is now engaged in studying the fact-finding report. There has been insufficient time, however, for the commission to formulate conclusions and recommendations

during the present session of the legislature. Accordingly permission has been secured to postpone the date of submitting the report until the end of the current calendar year.

"Some of the general facts relating to the survey may be summarized as follows: In the first place the tremendous increase in students at colleges and universities all over the country has been shared in Massachusetts. Regular full-time students increased from 20,164 in 1916 to 27,746 in 1922, or 37.2 per cent. In Massachusetts, however, an unusually large proportion of these students come from without the State. In 1921, 50.6 per cent of the students registered at Massachusetts colleges and universities resided in other States. Statistics for the same year show that Masachusetts stands only twenty-first in the Union in the proportion of its population from 19 to 23 years of age which is in college. . .

"It seems clear that young men graduating from the public high schools are much more likely to go to college than the young women. Last autumn 32.5 per cent of the young men graduating in June, 1922, entered college, as against only 10.9 per cent of the young women. On the other hand, 12.1 per cent of the girls went to normal schools, as against 1.6 per cent of the boys. Girls also went in much larger proportions to business colleges and other schools.

"In this connection it is interesting to note that according to an intelligence test given to 3333 high school students who will graduate this spring, 36 per cent of the boys appeared to be good college material, as against only 22 per cent of the girls. However, the girls who planned to go to college appeared to be fully the equal of the boys in mental ability.

"On the other hand, the students, most of them young women, who planned to go to normal schools were according to the results of the tests, not only of lower average mental ability than those who expected to enter college but also lower than the general average of those who did not expect to continue their education at all.

"Certain of the colleges draw their Massachusetts students primarily from the private secondary schools, as for example, Smith College, 63.4 per cent; Williams College, 62.5 per cent; and Boston College, 57.8 per cent. Harvard University drew 60.8 per cent of its Massachusetts students who entered in the autumn of 1922 from the public high schools.

"At all the Massachusetts colleges and universities, except Boston

College, the rate of tuition has increased since 1916. The general average for tuition in liberal arts and sciences has increased from $141.67 to $218.03, or 53.9 per cent. In general, tuition for technical and professional curricula has not advanced quite so much.

"Notwithstanding this situation the proportion of income secured by the institutions from tuition fees has not been increased. Moreover, the total amount of money distributed annually by the colleges to needy and worthy students is impressive in size. In 1921–22 the amount was $726,361. Also, on account of the short distances in Massachusetts and the unusually good transportation facilities, a large proportion of the students who attend college can live at home while doing so if they wish.

"The survey commission was directed specifically to consider two methods of supplementing the present provisions for technical and higher education in the Commonwealth; namely, 'the establishment of a State university, or further co-operation with existing institutions.'

"It seems clear that the latter method refers to the possible establishment in Massachusetts of a system of State scholarships such as now obtains in New York State. In view, however, of the provision in the State constitution popularly known as the "anti-aid" clause, there was considerable doubt as to whether such a system of State scholarships would be constitutional.

"After examining the attorney general's opinion the survey commission decided that it was unlikely that a bill establishing a system of State scholarships could be drawn, which would be declared constitutional by the courts of Massachusetts. No other plan of co-operating with existing institutions has as yet been presented except the possibility of taking over certain existing higher institutions under complete State control. Up to this time no institutions have offered themselves to the State and it seems improbable that they will do so.

"Accordingly the survey commission has examined other possibilities, including a State university. Uppermost in the discussion of this suggestion has been the cost of such a State university. A careful analysis was made on the basis of a State university enrolling 4000 students distributed as follows: (1) Arts and science, 1250; (2) engineering, 600; (3) medicine, 300; (4) law, 250; (5) pharmacy, 150; (6) dentistry, 150; (7) commerce and business, 500; (8) education, 600; (9) graduate school, 200. The medium estimate for buildings and furniture was $9,975,000. No estimates were made on the

cost of land. The medium estimate for equipment was $1,665,000. The probable annual cost of operation and maintenance was fixed at $1,970,500, including receipts from student fees. . . .

"The attention of the survey commission has also been directed to the possibility of establishing a State-wide system of junior colleges. The outstanding features of the plan are that the junior colleges should be supported largely by the State and supervised by the State department of education, but that they should be administered through local school systems. It was shown that by locating 12 of these junior colleges in the chief centers of population, nearly 90 per cent of the population would be within 15 miles of a junior college."

G. F. ZOOK, in *School Life*.

UNIVERSITY OF MICHIGAN.—

October 11, 1923.

Geo. W. Wickersham,
15 West Thirty-Seventh St.,
New York City.

Referring to this morning's news of the refusal of the University of Michigan Regents to permit a discussion of the League of Nations in University Buildings, I proffer you the confident belief that no other University authorities will take that view, and on behalf of the Faculty of Law of Northwestern University I ask for the date vacated by Michigan University. That University like most others purports to exclude discussion of current partisan politics. But to confuse political science with partisan politics is an error of the first magnitude and imports danger to free University research for truth. The seal-motto of Northwestern University is *Quaecumque sunt vera*. The faculties and not the regents or trustees are the custodians of educational research, and when they placed in the curriculum the subjects political science and international law they did not conceive the range of discussion to be limited to such matters as the powers of county commissioners or the treaties of Louis the Fourteenth. Please name your date.

JOHN H. WIGMORE,
Northwestern University Law School.

# MEMBERSHIP

## MEMBERS ELECTED

The Committee on Admission announces the election of eighty-three members, as follows:

**Allegheny College,** I. R. Beiler, C. A. Darling, J. R. Schultz; **University of Arkansas,** G. H. Cady, S. C. Dellinger, A. S. Humphreys, James Kessler, H. A. Sandhouse; **Bowdoin College,** T. C. Van Cleve; **Butler College,** H. E. Jensen; **Carnegie Institute of Technology,** Edmond Esqueré, W. B. Jones, H. L. McKee, W. H. Trumbauer; **Central Missouri Teachers' College,** C. H. McClure, J. H. Scarborough; **Iowa State College,** Adolph Shane; **Kansas State Agricultural College,** N. A. Crawford; **Michigan Agricultural College,** C. W. Chapman, A. J. Clark, S. E. Crowe, H. B. Dirks, L. C. Emmons, W. W. Johnston, Edwin Morrison, A. H. Nelson, L. C. Plant, W. E. Reuling, A. R. Sawyer, O. L. Snow, R. M. Snyder, G. G. Speeker, F. A. Spragg, H. J. Stafseth; **University of Minnesota,** Gustav Bachman, Frederic Bass, James H. Forsythe, N. L. Huff, W. H. Hunter, A. C. Krey, F. M. Mann, J. V. Martenis, L. F. Miller, D. E. Minnich, J. Anna Norris, E. F. Parker, C. J. V. Pettibone, J. J. Reighard, W. H. Richards, S. C. Shipley, J. J. Willaman, Holbrook Working; **University of Missouri,** Max M. Ellis, C. D. Hart; **Ohio State University,** D. J. McDonald, Bernard Raymund, L. M. Simes, W. C. Weidler; **Ohio University,** C. E. Cooper, O. E. Dunlap, W. H. Fenzel, W. S. Gamertsfelder, H. G. Good, E. J. Jones, Jr., O. E. McClure, J. P. Porter, H. F. Scott, R. M. Slutz, G. T. Wilkinson; **Oklahoma Agricultural and Mechanical College,** A. S. Hiatt; **Oregon State Agricultural College,** J. H. Batcheller, J. F. Brumbaugh, G. V. Copson, W. H. Ellison, Nathan Fasten, D. C. Livingston; **Penn College,** W. E. Berry; **Southern Methodist University,** S. H. Moore; **University of Washington,** A. F. Carpenter, G. E. Goodspeed, E. J. Saunders, T. G. Thompson; **Wittenberg College,** F. K. Kruger.

## NOMINATIONS FOR MEMBERSHIP

The following two hundred and thirty-four nominations are printed as provided under Article IV of the Constitution. Objection to any nominee may be addressed to the Secretary, H. W. Tyler, Cambridge, Mass., or to the Chairman of the Committee on Admissions[1] and will be considered by the Committee if received before Jan. 20, 1924.

The Committee on Admissions consists of Florence Bascom (Bryn Mawr), Chairman, J. Q. Dealey (Brown), A. R. Hohlfeld (Wisconsin), A. L. Keith (South Dakota), G. H. Marx (Stanford), F. A. Saunders (Harvard), and F. C. Woodward (Chicago).

C. E. Allen (History), Centre
Harry M. Barrett (Education), Colorado
Moses Barrou (Medicine), Minnesota
Ralph Edward Berry (Commerce), Wyoming
Charles C. Bidwell (Physics), Cornell
Sarah G. Blanding (Physical Education), Kentucky
J. V. Breitwieser (Education), California
Lewis A. Brigham (Astronomy and Mathematics), Boston
Orville G. Brim (Rural Education), Cornell
Warner Brown (Psychology), California
Robert Belle Burke (Latin), Pennsylvania
S. McC. Butt (Philosophy), Princeton
Harry Caplan (Public Speaking), Cornell
E. Chandler (Chemistry), Occidental
Laurence B. Chenoweth (Hygiene), Cincinnati
Philip Greeley Clapp (Music), Iowa
Harrison C. Coffin (Greek), Union
George R. Coffman (English), Grinnell
Salvador Cornejo (Languages), Boston
Edna N. Cranna (Secretarial), Carnegie
Douglas Gordon Crawford (English), Boston
George A. Cummings (French), Boston
Hubertis M. Cummings (English), Cincinnati
S. E. Dibble (Industries), Carnegie
Ethel Barbara Dietrich (Economics and Sociology), Mt. Holyoke

[1] Nominations should in all cases be presented through the Secretary, H. W. Tyler, 222 Charles River Road, Cambridge, Mass.

A. M. Drummond (Public Speaking), Cornell
Curt John Ducasse (Philosophy), Washington
Alice H. Farnsworth (Astronomy), Mt. Holyoke
Harold U. Faulkner (English and History), Mass. Inst. Tech.
Ernest N. Fergus (Agronomy), Kentucky
Emery N. Ferriss (Rural Education), Cornell
Alice Foster (Geology), Mt. Holyoke
Louis Oliphant Gibbons (History and Economics) Wyoming
George Ernest Gibson (Chemistry), California
Joseph Grinnell (Zoology), California
Robert Hannah (Public Speaking), Cornell
J. W. Hart (Education), California
C. E. Hayden (Veterinary Physiology), Cornell
Levi J. Horlacher (Animal Husbandry), Kentucky
Margaret B. Horsfield (Romance Languages), Kentucky
R. G. Hoskins (Physiology), Ohio
Hoyt H. Hudson (Public Speaking), Cornell
Everett L. Hunt (Public Speaking), Cornell
Edward S. Jones (Psychology), Buffalo
J. C. Jones (Political Science), Kentucky
Alexander Kaun (Slavic Languages), California
Clarence Kennedy (Art), Smith
Grant C. Knight (English), Kentucky
John R. Knipfing (European History), Ohio
Carl A. Lampert (Music), Kentucky
Martha Lena Lenhardt (Romance Languages), Morningside
Leonard B. Loeb (Physics), California
Robert H. Lowie (Anthropology), California
H. F. Lutz (Semitic), California
James B. Macelwane (Geology), California
Jeannette Marks (English), Mt. Holyoke
Elizabeth J. McKittrick (Home Economics), Wyoming
Guy Eliot McLean (Music), Ohio Wesleyan
J. B. Miner (Psychology), Kentucky
M. C. Minor (Economics), Centre
Guy Montgomery (English), California
Edmund C. Mower (Government), Vermont
C. H. Myers (Plant Breeding), Cornell
Horace Newhart (Medical), Minnesota

Norreys Jephson O'Conor (English), Mt. Holyoke
Ralph E. Oesper (Chemistry), Cincinnati
A. R. Olson (Chemistry), California
Sidney R. Packard (History), Smith
C. M. Panunzio (Social Science), Willamette
George Z. Patrick (French and Russian), California
Waldo C. Peebles (Spanish), Boston
Warren Charles Perry (Architecture), California
William B. Plank (Mining Engineering), Lafayette
Howard W. Post (Chemistry), Buffalo
Howard K. Preston (Engineering), Delaware
A. L. Prickett (Commerce), Indiana
Ottis H. Rechard (Mathematics), Wyoming
Ward G. Reeder (School Administration), Ohio
Edward Z. Rowell (Public Speaking), California
C. M. Sax (Art), Kentucky
F. Schneider (German), California
Claude N. Settles (English), Rose
Lloyd L. Smail (Mathematics), Oregon
Christianna Smith (Zoology), Mt. Holyoke
Maxwell A. Smith (French), Chattanooga
Charles C. Staehling (Economics), California
Anna M. Starr (Botany), Mt. Holyoke
Thurman W. Stoner (Political Science), Buffalo
Harold Griffith Sutton (Economics), George Washington
William S. Taylor (Education), Kentucky
A. Roy Thompson (Spanish), Boston
D. F. Thompson (Economics and Sociology), Boston
Clarence Milton Updegraff (Law), George Washington
Robert Palfrey Utter (English), California
W. D. Valleau (Agronomy), Kentucky
Blake R. Vanleer (Mechanical Engineering), California
Dwight Everett Watkins (Public Speaking), California
Paul V. West (Education), Chattanooga
L. A. Williams (Education), California
Horace Williston, Jr., (English), Willamette
Fred R. Yoder (Economics), Washington State

*Supplementary List*

L. D. Bailiff (Modern Languages), Wyoming

Vola Price Barton (Physics), Goucher
W. S. Bernard (Greek), North Carolina
H. H. M. Bowman (Biology), Toledo
William Moseley Brown (Education), Washington and Lee
James B. Bullitt (Pathology), North Carolina
W. E. Caldwell (History), North Carolina
T. Moody Campbell (German), Wesleyan
C. D. Carus (Commerce), Southern California
Victor J. Chambers (Chemistry), Rochester
Lynn Clark (English), Southern California
William Coan (Commerce), Washington and Lee
Roy E. Cochran (History), Nebraska
Allen C. Conger (Zoology), Ohio Wesleyan
C. E. Cousins (Romance Languages), University of Iowa
Bartholow V. Crawford (English), University of Iowa
S. H. Dadisman (Education), Wyoming
G. S. Dickinson (Music), Vassar
Paul H. Dike (Physics), North Carolina
J. T. Dobbins (Chemistry), North Carolina
Grove S. Dow (Sociology), Denver
Katherine Easley (English), Toledo
Floyd H. Edminster (Chemistry), North Carolina
Thos. J. Fitzpatrick (Botany), Nebraska
John N. Force (Hygiene), California
Joseph H. Foth (Economics), Rochester
Thos R. Garth (Psychology), Denver
W. G. George (Medicine), North Carolina
Jane F. Goodloe (German), Goucher
William Kurtz Gotwald (History), Wittenberg
Edwin Greenlaw (English), North Carolina
G. A. Harrer (Latin), North Carolina
C. A. Hibbard (English), North Carolina
E. G. Hoefer (Electrical Engineering), North Carolina
E. Deane Hunton (Commerce), Wyoming
Howard R. Huse (Romance Languages), North Carolina
Granville B. Johnson (Physical Education), Denver
W. W. Kemp (Education), California
Frank H. Knight (Economics), University of Iowa
Samuel Howell Knight (Geology), Wyoming

Perle Shale Kingsley (Public Speaking), Denver
H. R. Kreider (Chemistry), Toledo
Leo T. Lawler (English), Carnegie
William F. Luebke (English), Denver
Roy Malcom (Political Science), Southern California
Walter J. Matherly (Commerce), North Carolina
Glenn N. Merry (Speech), University of Iowa
E. C. Metzenthin (Germanics), North Carolina
Werner C. Michel (German), West Virginia
Emerson W. Miller (Oratory), Ohio Wesleyan
C. T. Murchison (Economics), North Carolina
Marjorie Nicolson (English), Goucher
Gordon Parker (Forestry), Colorado College
L. H. Peterson (Education), California
Abbie F. Potts (English), Vassar
Giles M. Ruch (Education and Psychology), University of Iowa
Herbert E. Russell (Mathematics), Illinois
Leslie W. Scofield (History), Denver
P. E. Smith (Anatomy), California
Justin F. Soule (Greek and Latin), Wyoming
Herman H. Staab (Romance Languages), North Carolina
M. R. Trabue (Education), North Carolina
Lovisa C. Wagoner (Psychology), Wyoming
N. W. Walker (Education), North Carolina
Robert N. Whiteford (English), Toledo
Lois Whitney (English), Goucher
Hattie Plum Williams (Sociology), Nebraska
Baldwin M. Woods (Engineering), California
Philena A. Young (Chemistry), Goucher
E. W. Zimmermann (Commerce), North Carolina

*Second Supplementary List*

Walter C. Barnes (History), Oregon
William C. Beaver (History), St. Olaf
A. A. Benedict (Physics), Iowa State
Richard W. Boynton (Philosophy), Buffalo
Julia Burgess (English), Oregon
Raymond G. Clapp (Physical Education), Nebraska
Edmund S. Conklin (Psychology), Oregon

F. A. Conrad (Economics), Arizona
Albert E. Cooper (Mathematics), Texas
Edward H. Decker (Law), Oregon
E. Merrick Dodd, Jr. (Law), Nebraska
Clifford G. Dunnell (Construction), Carnegie
Harrison B. Fagan (Economics), Denver
William V. N. Garretson (Mathematics), Rutgers
Sherlock B. Gass (English), Nebraska
Cliff S. Hamilton (Chemistry), Nebraska
W. Don Harrison (English), Pittsburgh
Elden B. Hartshorn (Chemistry), Dartmouth
Leon A. Hausman (Zoology), Rutgers
J. Lester Hayman (Pharmacy), West Virginia
J. O. Hertzler (Political Science), Nebraska
Edwin T. Hodge (Geology), Oregon
Russell M. Howard (Economics), Arizona
Almeda May Janney (History), Toledo
Burgess Johnson (English), Vassar
Hugh Pratt Kean (Mathematics and Physics), Wittenberg
W. W. Kemp (Education), California
Henry Herbert Kildee (Animal Husbandry), Iowa State
John Robert Kline (Mathematics), Pennsylvania
Chester F. Lay (Economics), Arizona
Fletcher Low (Chemistry), Dartmouth
Edward Hiram McAlister (Mechanics and Astronomy), Oregon
Robert J. Millar, (Architectural Drawing), Carnegie
Ernest V. Page (Commerce), Carnegie
Henry Augustus Perkins (Physics), Trinity (Conn.)
Frances M. Perry (English), Arizona
Leo G. Raub (Physics), Louisville
W. T. Root (Psychology), Pittsburgh
Earle Dudley Ross (History), Iowa State
C. E. Rugh (Education), California
Thomas F. Sanford (English), California
Elmer Lawrence Sargent (Chemistry), Rutgers
A. B. Schmidt (Economics), Arizona
R. L. Sergel (English), Pittsburgh
Kent Shaffer (Machine Production), Carnegie
Harvey A. Simmons (Mathematics), Pittsburgh

Bryan Smith (Law), Colorado
P. E. Smith (Anatomy), California
Warren DuPre Smith (Geology), Oregon
Pauline Sperry (Mathematics), California
C. W. Sproul (Machine Design), Carnegie
Florence M. Steward (English), Toledo
P. D. Strausbaugh (Botany), West Virginia
Albert Raddin Sweetser (Botany), Oregon
DeRossette Thomas (Home Economics), Arizona
George Jarvis Thompson (Law), Pittsburgh
Sam F. Trelease (Plant Physiology), Louisville
J. E. Weaver (Botany), Nebraska
J. Y. Wheatley (Machine Design), Carnegie
Henry J. Witteveen (Mines), North Dakota
Warner F. Woodring (History), Morningside
Baldwin M. Woods (Aerodynamics), California
Kimball Young (Psychology), Oregon